Proposed Residential Development,

Land North of Thaxted Road, Saffron Walden

Transport Statement prepared on behalf of Kier Ventures Limited

November 2023

MILESTONE TRANSPORT PLANNING

Proposed Residential Development, Land North of Thaxted Road, Saffron Walden

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CONTENTS

Tables

Appendices

1. Introduction & Scope of Statement

Introduction

1.1 This Transport Statement (TS) has been prepared on behalf of Kier Ventures Limited to consider the highways and transport matters associated with an outline planning application submitted to the Secretary of State for determination under Section 62A of the Town & Country Planning Act (1990) on land to the north of Thaxted Road, Saffron Walden (the "Site").

1.2 The application description is as follows:

> *"Outline planning application for development of the site for up to 55 dwellings, associated landscaping and open space, with access from Knight Park."*

1.3 The application seeks only the principle of the proposed residential land use and the means of access to be determined. Matters such as appearance, landscaping, layout, and scale are reserved for future determination however, to inform, the planning application, illustrative material in respect of these is provided for context.

1.4 The TS will demonstrate:

- The hierarchical approach to development on the Site where priority is given to active travel modes, i.e., walking and cycling, as well as sustainable transport, i.e., local bus services, over vehicle-borne trips.
- The integration of the Site into the existing settlement through the delivery of permeable and accessible active travel corridors with direct links to key local retail, education, and employment opportunities as well as public transport services.
- The residual, cumulative impact of vehicle borne trips generated by the emerging development on the surrounding highway network, particularly the constrained town centre network, will not be severe.

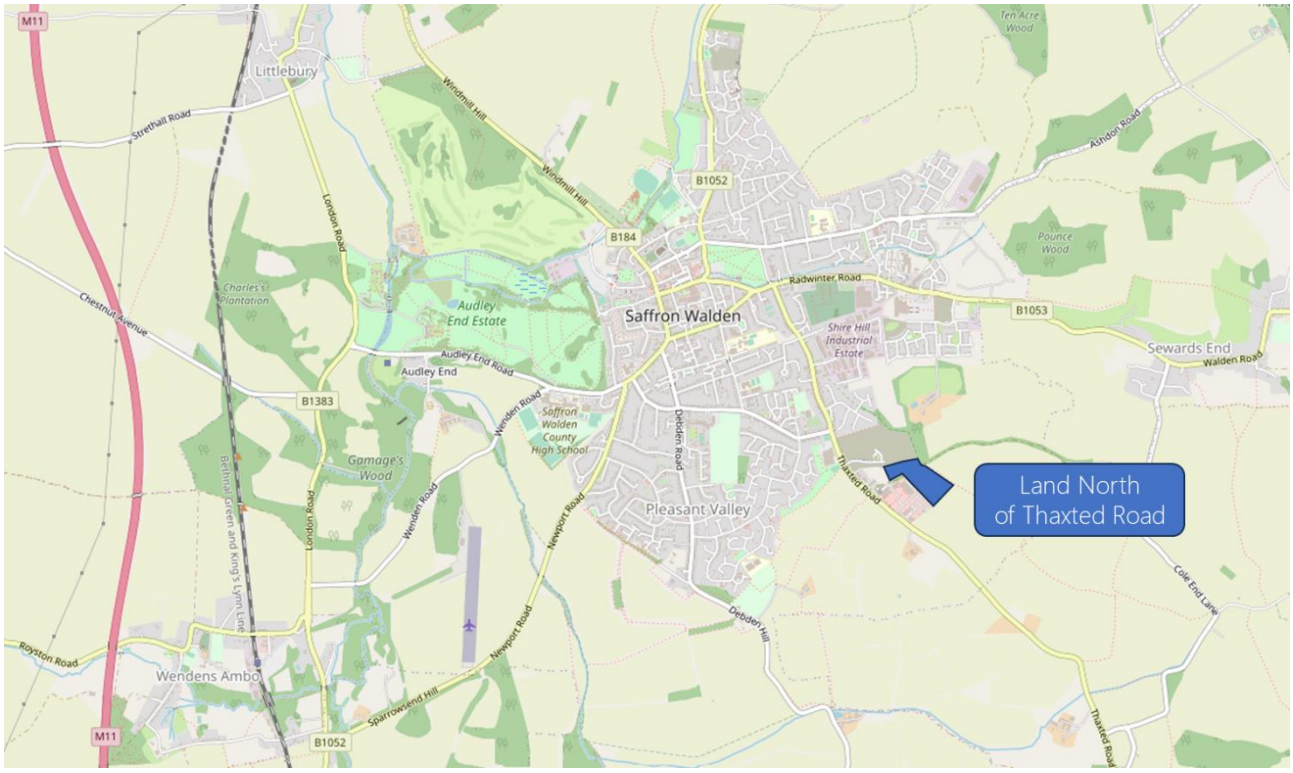
Site Location

1.5 The Site falls within the administrative boundary of Uttlesford District Council (UDC) who are the Local Planning Authority.

1.6 The Site is bounded by established residential and commercial development to the north and west. Specifically, the recently consented residential developments of Land East of Thaxted Road (UDC Ref. UTT/20/00078/REF) and Land to the rear of old Cement Works, Thaxted Road (UTT/20/0864/FUL) form the northern and north-western boundaries of the Site and are currently under construction.

1.7 Knight Park forms the south-western boundary of the Site. Land to the south and east of the Site is agricultural fields that form part of the Audley End Estate. The contextual location of the Site in relation to the local area is shown in Figure 1.

Figure 1 Site Location



Structure of TS

1.8 Given the scale of development, the suite of documentation to accompany the outline planning application that will assess the implications of development-related travel on the operational and safety characteristics of the surrounding highway and transport networks includes this Transport Statement (TS) and a Framework Travel Plan (FTP) that is submitted alongside the TS.

1.9 The TS will consider the appropriateness of the type of development proposed in this location in the context of transport-related policy both at National and Local level with the emphasis on ensuring that the site is accessible by all modes of travel.

1.10 The TS will demonstrate that in terms of Planning Policy at both National and Local level and through robust interventions including the implementation of a Travel Plan and, where required, appropriately scaled mitigation measures, the Site and the surrounding highway and transport networks can accommodate the proposed level of development.

1.11 In the lead up to the submission of this planning application, Kier Ventures Ltd and Milestone Transport Planning Ltd ("MTP") have engaged in pre-application discussions through regular virtual meetings with ECC's Strategic Development Engineers. In August 2023, a pre-application Technical Note was issued to ECC, and a formal response was issued by ECC's Strategic Development team in September 2023 (ECC Ref. FS538162742 UTT). A copy of the ECC Strategic Development pre-application response is included as Appendix 1 to the TS.

1.12 Based upon the formal pre-application response and the ongoing dialogue with ECC's Strategic Development team, and in the context of the DCLG's Planning Practice Guidance on 'Travel Plans, Transport Assessments and Statements in Decision Making' (2014), the scope of the TS is, as follows:

- Section 2 consider the application proposals in the context of relevant transport policy at both National and Local Level including the NPPF (2023), the NPPG (2014), the National Design Guide (2019), ECC Development Management Policies (2011), the Essex Transport Strategy (2011), the Essex Design Guide (2018), the current UDC Adopted Local Plan (2005), the UDC Cycling Action Plan (2018), the UDC Interim Climate Change Policy (2021) and the Saffron Walden Neighbourhood Plan (2022).
- Section 3 provides a review of baseline conditions in respect to active travel (walking and cycling) infrastructure, public transport infrastructure, as well as the operational and safety characteristics of the surrounding highway network.
- Section 4 examines the proposed movement and access strategy for all modes that underpins the development of the indicative masterplan that is based on hierarchical principles where priority is given to pedestrians, cyclists and public transport over vehicular access, deliveries, servicing and refuse collection.
- Section 5 outlines peak period and daily trip generational characteristics by all modes of travel and its, distribution & assignment onto the wider highway and transport networks.
- Section 6 provides detail on modelling input data including the extent of the study area, background data sources, baseline and future assessment years and the growth factors applied as well as details of committed development assumptions.

- Section 6 also assesses the impact of the development-related traffic on the operational characteristics of highway links and junctions within the study area against a background of future baseline and future baseline plus development scenarios.
- Section 7 summarises and concludes the findings within the TS.

2. Planning & Transport Policy Context

National Planning Practice Guidance (2014)

2.1 The National Planning Practice Guidance (NPPG) sets out current guidance for different aspects to development. For the purposes of this document, the guidance within the NPPG 'Travel Plans, Transport Assessments and Statements' is the most pertinent. The NPPG sets out the following with regards to Transport Statements:

> *"…Transport Statements primarily focus on evaluating the potential transport impacts of a development proposal… The …Transport Statement may propose mitigation measures where these are necessary to avoid unacceptable or "severe" impacts… Transport Statements can be used to establish whether the residual transport impacts of a proposed development are likely to be "severe" …"*

2.2 It is noted within the NPPG that Transport Statements can positively contribute towards:

- Encouraging sustainable travel.
- Lessening traffic generation and its detrimental impacts.
- Reducing carbon emissions and climate impacts.
- Creating accessible, connected, inclusive communities.
- Improving health outcomes and quality of life.
- Improving road safety.
- Reducing the need for new development to increase existing road capacity or provide new roads.

National Design Guide (2019)

2.3 Paragraph 75 of the NDG identifies that development should deliver a movement network that makes connections to destinations, places, and communities, both within the site and beyond its boundaries. Paragraph 76 goes on to state that this can be delivered by:

- A clear pattern of streets that are safe and accessible for all.
- Limiting car use by prioritising and encouraging walking, cycling and public transport.
- Mitigating impacts and identifying opportunities to promote activity and social interaction, contribute to health, well-being, accessibility, and inclusion; and
- Incorporating green infrastructure to soften impact of car parking, help improve air quality and contribute to biodiversity.

2.4 Paragraph 77 states that *"A well-designed and connected network gives people the maximum choice in how to make their journeys. This includes by rail, other public transport, walking, cycling and by car. Priority is given to pedestrian and cycle movements, subject to location and the potential to create connections."*

2.5 Paragraph 78 defines pedestrian and cyclist priority as constituting routes that are safe, direct, convenient, and accessible for people of all abilities. It also states that public rights of way need to be protected, enhanced and well-linked into the wider network. Paragraph 79 of the NDG also confirms that, in well-designed places, people should not need to rely on the car for everyday journeys, including getting to workplaces.

2.6 Paragraphs 84-87 of the NDG address issues concerning parking noting that how parking is arranged has a fundamental effect on the quality of a place or development. Paragraph 86 states that:

> *"Well-designed parking is attractive, well-landscaped and sensitively integrated into the built form so that it does not dominate the development or the street scene. It incorporates green infrastructure, including trees, to soften the visual impact of cars, help improve air quality and contribute to biodiversity. Its arrangement and positioning relative to buildings limit its impacts, whilst ensuring it is secure and overlooked."*

2.7 Paragraph 87 of the NDG requires that Electric vehicle spaces and charging points need to be suitably located, sited, and designed to avoid street clutter. Paragraph 88 of the NDG requires that access for servicing be well-integrated into developments, including for refuse collection.

National Planning Policy Framework (2023)

2.8 Promoting sustainable transport is a key thread of the NPPF and para. 104 highlights the importance of considering transport issues from the earliest stages of development proposals to ensure that:

- *"The potential impacts of development on transport networks can be addressed.*
- *Opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated.*
- *Opportunities to promote walking, cycling and public transport use are identified and pursued.*
- *The environmental impacts of traffic and transport infrastructure can be identified, assessed, and considered – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains.*
- *Patterns of movement, streets, parking, and other transport considerations are integral to the design of schemes and contribute to making high quality places."*

2.9 Para. 105 goes on to state that: *"The planning system should actively manage patterns of growth…Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes…"*

2.10 Para. 106 recommends that: *"Planning policies should support an appropriate mix of uses across an area, and within larger scale sites, to minimise the number and length of journeys needed for employment, shopping, leisure, education and other activities"*. It goes on to state that sites and routes that could be critical to develop infrastructure to widen transport choice and realise opportunities for large scale development should be identified and protected. The provision for attractive and well-designed walking and cycling networks along with supporting facilities such as secure cycle parking should also be a key component of planning policy.

2.11 Para. 110 requires that when assessing specific allocations for development it is important to ensure that:

- *"Appropriate opportunities to promote sustainable transport modes have been taken up.*
- *Safe and suitable access to the site can be achieved for all users.*
- *The design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code.*
- *Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree."*

2.12 Para. 111 continues to state that *"…developments should only be prevented or refused on highway grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe".*

2.13 Para. 112 requires that applications for development should:

- First, give priority to pedestrian and cycle movements, both within the scheme and with neighbouring areas.
- Second, so far as is possible, facilitate access to high quality public transport, maximising catchment areas to services and implementing appropriate facilities to encourage use.
- Address the needs of people with disabilities and reduced mobility.
- Create places that are safe, secure, and attractive which minimise conflicts between pedestrians, cyclists, and vehicles.
- Allow for the efficient delivery of goods and access by service and emergency vehicles.
- Be designed to enable charging of plug-in and other ultra-low emission vehicles.

2.14 Para. 113 requires that: *"All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed."*

ECC Supplementary Guidance – Development Management Policies (2011)

2.15 ECC have Transport Development Control Policies that set a framework for protecting the transport network for the safe movement of people and goods in the context of new development proposals. Under Policy DM1, the key aims of the Transport Development Control Policies are to:

- Minimise the number of access points on roads designated within the Development Management Route Hierarchy.
- Ensure that new accesses are designed and constructed in accordance with current standards having regard to the capacity, safety, and geometry of the highway network.
- Safeguard safe and convenient access for sustainable transport modes commensurate to its location.

- Ensure that proposals will not create a significant potential risk or be detrimental to the safety of the highway network.

2.16 In respect of roads within new residential estates, Policy DM6 requires that, where required, streets are designed to allow access by passenger transport vehicles, emergency vehicles and refuse vehicles. This requires that streets carrying passenger transport vehicles must have a minimum carriageway width of 6.75 metres.

2.17 Policy DM6 also requires that the design of residential streets should have particular emphasis on ensuring a high-quality built environment and public realm and give cognisance to the current standards set out in the Essex Design Guide, Urban Place Supplement, and relevant national guidance including Manual for Streets.

2.18 Where an estate road joins a higher classification of road the junction must be designed and constructed in compliance with the standards contained in the Design Manual for Roads and Bridges (DMRB).

2.19 In respect of vehicle parking standards, Policy DM8 requires that all development proposals comply with ECC's "Parking Standards: Design & Good Practice" document.

2.20 Policy DM9 requires that development should minimise the number of trips by the private vehicle through the provision of alternative transport modes and/or associated infrastructure. In this regard, Policy DM9 requires that alternatives to private car use are considered as a first principle in assessing travel impacts on the transportation network and mitigation will be required through the application of comprehensive travel planning options, where impact is identified.

2.21 Policy DM9 continues to state that all development proposals need to be assessed and determined against a series of strategies developed by ECC in respect of passenger transport, cycling, walking and rail as well as their Schools & Colleges Sustainable Modes of Travel Strategy and Essex Workplace Sustainable Business Strategy. Where any impact is identified against any of these strategies, mitigation is required.

2.22 Policy DM10 requires the provision of a Travel Plan and Residential Travel Information Pack for all new residential dwellings.

2.23 In the context of Public Rights of Way, Policy DM11 states that, wherever possible, the existing network is safeguarded and that development proposals should be laid out to accommodate it. The creation of new and / or enhanced Definitive Public Rights of Way are encouraged to promote alternative modes of travel and that such new and / or enhanced provision should be convenient and suitable in all respects to all users as well as being constructed in accordance with current standards.

2.24 Thresholds for the assessment of impacts arising from an emerging development proposal in the form of a Transport Statement (TS) or Transport Assessment (TA) are set out in Policy DM13. Policy DM14 goes on to require that a Stage 1 Safety Audit report, including designer's response, must be undertaken, and submitted with a planning application where it is proposed to materially alter the existing highway.

2.25 Under Policy DM15, the safety and efficiency of the public highway is protected by requiring development to

- *"…demonstrate that the development proposal has no detrimental impact upon the existing or proposed highway in congestion terms, as measured by assessing existing and proposed link/junction capacity relevant to the development site; or*
- *provide appropriate mitigation measures to ensure that there is no detrimental impact to the existing highway."*

2.26 Any identified mitigation will either by secured by way of physical works delivered by the proposed development or by financial contribution either specific to the development itself or pooled with other development to deliver area-wide measures, as set out under Policy DM17. Any requirement for future maintenance liability associated with new highway infrastructure will be secured under Policy DM18.

2.27 Under Policy DM20 the safety and efficiency of the highway network is protected under the construction phase of a development by ensuring that:

- *"Any temporary construction access and/or haul road will be agreed with the Highway Authority prior to commencement of development.*
- *a Construction Traffic Management Plan is submitted and agreed with the Highway Authority prior to commencement of development.*
- *details of parking and turning facilities for all construction traffic within the development site are submitted and agreed with the Highway Authority prior to commencement of development.*
- *details of wheel cleaning facilities within the development site are submitted and agreed with the Highway Authority prior to commencement of development."*

ECC Transport Strategy (LTP3, 2011)

2.28 The Essex Transport Strategy is the County's mechanism for delivering transport investment and priorities that:

- *"Provide connectivity for Essex communities and international gateways to support sustainable economic growth and regeneration.*
- *Reduce carbon dioxide emissions and improve air quality through lifestyle changes, innovation, and technology.*
- *Improve safety on the transport network and enhance and promote a safe travelling environment.*
- *Secure and maintain all transport assets to an appropriate standard and ensure that the network is available for use.*
- *Provide sustainable access and travel choice for Essex residents to help create sustainable communities."*

2.29 Transport priorities for the West Essex that are set out in LTP3 and are pertinent to this planning application include:

- Improving access to and from the M11 corridor.
- Providing the transport improvements needed to support employment growth.
- Improving the attractiveness of bus services.

- Improving cycling networks and walking routes and encouraging their greater use.
- Improving the attractiveness of public spaces and their ease of use.
- Improving access to Stansted Airport by low carbon forms of transport.

2.30 Policy 2 of LTP3 states that *"Transport and land-use planning will be used together to secure new development at the most appropriate and sustainable locations by:*

- *"Working closely with district planning authorities to enable a better balance of new homes, jobs, and services.*
- *locating new developments in areas which are accessible to key services by sustainable forms of transport.*
- *ensuring new developments provide for sustainable transport and effective travel planning.*
- *requiring new developments to provide appropriate transport infrastructure in line with the Council's current development management policies; and*
- *making the most effective use of all available funding sources by co-ordinating the delivery of ECC and development funded works."*

2.31 ECC will support and encourage the use of lower carbon travel by promoting the use of more sustainable forms of travel and ensuring new developments minimise the number and length of trips made by private vehicles under Policy 7 of LTP3. To promote sustainable travel choices, Policy 8 of LTP 3 requires effective travel planning to be provided with any emerging development.

2.32 Under Policy 10 of LTP3, the County will work to reduce the incidence and severity of road traffic collisions on roads in Essex by ensuring Safety Audits are undertaken of all proposed designs of new highway schemes or proposals to materially alter the existing public highway.

Essex Design Guide (2018)

2.33 The Essex Design Guide (EDG) provides detailed guidance regarding emerging development form, integrated within which are references to street layout and design, accommodating transport movement and access.

2.34 Section 3 of the EDG requires permeable layouts that connect well with the existing walking and cycle networks within and outside of the development through the creation of direct routes. Covered and secured cycle storage should be in prominent and accessible locations. Section 3 of the EDG goes on to state that:

> *"A well-connected urban environment consists of shared, multi-functional spaces which have convenient and integrated routes for pedestrians, cyclists, cars and public transport and which are therefore more able to support a range of viable travel options…new developments should be planned so as to reduce demand for road space and provide the community with sustainable and realistic alternative transport options."*

2.35 Within Section 3 of the EDG, reference is made to the requirements for electric vehicle charging points within new development.

2.36 Section 4 of the EDG further explores the requirements for parking within new development and sits alongside the EPOA Essex Parking Standards. The EDG requires that parking be integrated but should not over dominate the public realm.

2.37 In respect of cycle storage, the EDG states that covered and secured cycle storage should be in prominent and accessible locations. In respect of vehicle parking, on-street provision should not restrict access to footpaths and cycleways. The EDG requires all forms of parking to be connected to and enabled for smart infrastructure, futureproofed to allow for adaptation at a future date.

2.38 At densities of less than 50 dwellings per hectare, such as that proposed, parking for residents should be a mix of on-plot, on-street or in small rear parking courts. Dedicated parking spaces for bicycles are to be provided either within an on-plot garage or in safe and secure communal parking spaces. Rear parking courts can have allocated or non-allocated spaces; if less than 100% parking is provided, spaces should be non-allocated. Parking areas should have no more than 5 spaces in a group, appropriately sub-divided by landscaping features.

2.39 The EDG requires that all residential developments include unallocated visitor parking in accordance with the Essex Parking Standards, evenly distributed across the site to ensure that inappropriate parking does not occur within the development, hindering walking, cycling and access to the development by vehicles and emergency vehicles.

2.40 Section 5 of the EDG focuses on street and road design, considering permeable layouts that link well to the existing transport, walking and cycle networks both inside and outside of the development, emphasising the Healthy Streets 'whole street' approach.

2.41 The EDG requires future technology infrastructure, including electric vehicle charging infrastructure, to be planned in and integrated successfully into new streets and spaces. Likewise, a balanced approach to surface materials needs to be made, meeting the needs of users whilst addressing the technical requirements of highways and placing a greater place-making emphasis in sensitive locations.

2.42 Section 6 of the EDG sets out the Highways Technical Manual, the overarching aim of which is to ensure that in new residential development the movement strategy is pleasant, convenient, safe, responds to local context and combines with good placemaking. Section 6 of the EDG states that *"motorised vehicle movement must efficiently service development without predominating, while walking, cycling and the use of public transport must be facilitated and encouraged, taking precedence over private modes of motorised transport."* In doing so, the key objectives of the Highways Technical Manual are to:

- Discourage inappropriate traffic from travelling through residential areas.
- Promote very low driver speeds within residential environments.
- Discourage the use of the private car, particularly for short or local trips.

UDC Adopted Local Plan (2005)

2.43 From a Transport and Access perspective, the key objectives of the UDC Local Plan (2005) are to:

- Locate high trip generating activity in areas well served by public transport.
- Increase the proportion of journeys made by rail and bus, on foot and by cycle.

- Reduce the number and length of motor vehicle trips by the location of development.
- Minimise the adverse effects of traffic on residential and shopping areas by traffic management measures.

2.44 This is captured in Policy GEN1 (Access) which states that development will only be permitted if it meets all the following criteria:

- *"a) Access to the main road network must be capable of carrying the traffic generated by the development safely.*
- *b) The traffic generated by the development must be capable of being accommodated on the surrounding transport network.*
- *c) The design of the site must not compromise road safety and must take account of the needs of cyclists, pedestrians, public transport users, horse riders and people whose mobility is impaired.*
- *d) It must be designed to meet the needs of people with disabilities if it is development to which the general public expect to have access.*
- *e) The development encourages movement by means other than driving a car."*

UDC Cycling Action Plan (2018)

2.45 The UDC Cycling Action Plan (CAP) was prepared as part of a County-Wide commitment, the key aims of which are to:

- Identify how cycling levels can be increased in the District.
- Prioritise funding for new cycling schemes in Uttlesford.
- Create a usable, high-quality cycle network that connects residential areas with key employment locations, railway stations and town centres; and
- Create opportunities to increase recreational cycling in Uttlesford.

2.46 From a review of the existing infrastructure and the potential opportunities to increase the proportion of trips made by cycle, the CAP makes recommendations for route and infrastructure enhancements.

2.47 The key recommendations of the CAP, pertinent to the scheme proposals, are to create an environment where cycling is normal, where existing barriers to cycling are removed and a series of cycle routes provided to create a connected cycle network over time. Cycling infrastructure should provide for both key utility journeys and encourage leisure cycling.

UDC Interim Climate Change Policy (2021)

2.48 UDC have an adopted Interim Climate Change Planning Policy that requires applications to address the fourteen policies set out therein, three of which relate to transport.

2.49 Interim Policy 1 requires developers to demonstrate the path that their proposals take towards achieving net-zero carbon by 2030, to include *"…locating the development where the associated climate change impacts and carbon emissions, including those derived from transport associated with the intended use of the development can be minimised…"*

2.50 Interim Policy 13 requires developers to *"…demonstrate how their proposals promote travel by sustainable transport modes in a manner and to a degree proportionate to the significance of the development proposed, particularly active travel modes (walking and cycling)."*

2.51 Interim Policy 14 states that new development should comply with the additional electric vehicle parking and charging standards below:

- All new parking spaces should be adaptable for electric vehicle fast charging (7- 22 kW), including through local electricity grid reinforcements, substation design and ducting.
- At least 20% of parking spaces in new developments should be provided with installed fast charging points, increasing in accordance with the Road to Zero Strategy.

2.52 Chapter 6 of the Interim Policy on Climate Change explores further matters related to sustainable transport. It expands on para. 105 of the NPPF (2021) by listing criteria against which a judgement can be made on whether a location is or can be made sustainable, which includes:

- The presence of, or potential for, footpath and cycle route connections to the existing settlement and other nearby attractors.
- The presence of, or potential for, bus stops and train stations with frequent services.
- Whether the proposed design prioritises the quality of the walking and cycling environment over the practicality of car use.
- Whether the development includes uses which reduce the need to travel elsewhere.

2.53 Chapter 6 goes on to state that *"…the Council will carefully consider whether all opportunities have been taken to promote sustainable transport, given the type of development and its location…. this will include but not be limited to:*

- *extending existing footpaths and cycle routes and adding new ones to ensure connectivity to the existing settlement and other nearby attractors.*
- *relocating existing bus stops and adding new ones to facilitate easy access to existing bus services.*
- *exploring with the County Council whether there is potential for increased/additional bus services; and*
- *ensuring that designs prioritise the quality of the walking and cycling environment over the practicality of car use."*

Saffron Walden Neighbourhood Plan (2022)

2.54 The Saffron Walden Neighbourhood Plan (SWNP) was adopted in October 2022. From a series of public consultation, the vision of the SWNP, from a movement and access perspective, is that Saffron Walden *"…will be a settlement of the highest environmental sustainability due to provision for pedestrians and cyclists, continued reduction in carbon emissions…Movement within the town will be safe and easy and journeys by car will be minimised."*

2.55 Policy SW4 of the SWNP requires that all new developments must provide for parking spaces for residents and visitors as per the Essex Works publication Parking Standards Design and Good Practice September 2009 or later equivalent.

2.56 In addition, Policy SW4 requires that the layout of vehicle and cycle parking spaces in all new developments must cross-refer to the Essex Design Guide (2018) as well as UDC's local parking standard for 4+ bedroomed dwellings. In addition, all dwellings need to make provision for electric vehicle charging points. The SWNP requires cycle parking to be secure and covered to encourage people to use bicycles regularly.

2.57 In respect of the promotion of walking and cycling, Policy SW12 of the SWNP states that: *"development proposals which retain, enhance or incorporate safe, attractive and direct walking and cycling routes on site as appropriate and which appropriately mitigate the impact of additional transport movements in the parish created through the development scheme will be supported."*

2.58 In support of this objective, Policy SW12 requires due regard to be given to the Uttlesford Cycling Action Plan and other SWNP infrastructure schemes. It goes on to state that:

- New footpaths, footways and cycleways are to be designed and built to a standard that they can be adopted by Essex County Council Highway Authority.
- New developments are to be permeable to encourage and enable pedestrians and cyclists to walk or cycle by the shortest route.
- Developer contributions to any off-site highways schemes or improvements must prioritise pedestrian and cycle movement first, then facilitate access to high quality public transport as far as possible including catchment areas and facilities to encourage such use and private vehicles last.

2.59 In respect of Travel Planning, Policy SW13 of the SWNP states that where developments will or are likely to generate significant amounts of movement, the Travel Plan must include provision, where appropriate, for the funding and delivery of necessary, sustainable travel initiatives and must have measurable objectives.

2.60 Under Policy SW14, the SWNP addresses improvements to public transport provision stating that: *"Where appropriate, developers will be expected to take every available opportunity to promote the use of public transport including identifying and protecting routes and delivering services and infrastructure to widen transport choice and accessibility to key destinations from the location of the site."*

2.61 Whilst more related to further development beyond the eastern limit of Saffron Walden, Policy SW15 entitled *"Vehicular Transport"* does highlight pertinent policy objectives that can be applied to the emerging development proposals. It states that additional traffic movements through the town will only be supported if it can be demonstrated that they will not increase congestion and that they will not impact on or appropriately mitigate the designated AQMA. Policy SW15 goes on to state that the provision of charging points for electric vehicles will be supported across all development types.

3. Baseline Conditions

Proximity of Local Amenities

3.1 Table 3.1 provides a summary of the distances to key local amenities surrounding the Site along with associated walk and cycle times.

Table 3.1 Proximity of Local Amenities

Land Use	Destination	Postcode	Distance (kms)	Walk Time (mins)	Cycle Time (mins)
Education	St Thomas More Catholic Primary	CB11 3DW	1.4	17	5
	R A Butler Infant / Junior	CB11 3DG	1.6	20	6
	Saffron Walden Nursery	CB11 3AQ	1.6	20	6
	Katherine Semar Infant / Junior	CB11 4DU	1.8	23	8
	Saffron Walden County High	CB11 4UH	2.4	-	10
Employment	Shire Hill	CB11 3AU	1.3	16	5
	Saffron Walden Town Centre	CB10 1HR	2.3	-	7
	Ashdon Road Commercial Centre	CB10 2NQ	3.0	-	12
Retail	Knight Park (Aldi, Costa, Pets at Home, B&M, Pure Gym, Premier Inn, Howdens)	CB10 2SG	0.1	2	1
	Waitrose, Saffron Walden Town Centre	CB10 1EH	2.3	-	7
	Saffron Walden Post Office	CB10 1AR	2.3	-	9
	Tesco, Radwinter Road	CB10 2JP	2.5	-	8
Civic	Household Recycling Centre	CB10 2UP	0.1	2	1
	Golden Acre Community Centre	CB11 4BL	1.8	23	8
	Uttlesford District Council Offices	CB11 4ER	2.1	-	8
Health	New Road Dental Practice	CB10 1LR	2.0	23	6
	Crocus Medical Practice / Saffron Walden Community Hospital	CB11 3HY	2.4	-	8
Recreation	One Minet Skatepark	CB11 3ED	0.9	11	3
	Lord Butler Fitness & Leisure Centre	CB11 3EG	0.9	11	3
	Saffron Walden Common	CB10 1FH	1.7	21	6

3.2 Para 4.4.1 of Manual for Streets (MfS) (2007) defines a walkable neighbourhood as a range of facilities within a 10-minute walk distance which, at a typical walking speed of 1.4 metres per second, is a walk distance of circa 840 metres. The Institute of Highways and Transportation (IHT) 'Providing for Journeys on Foot' document (2000) references 1.0km as an acceptable walking distance for all journeys with a maximum of 2.0km for commuting and education purposes.

3.3 From Table 3.1, it is evident that there are a number of day-to-day facilities within the walkable neighbourhood of the Site including local primary schools, the Knight Park retail park and recycling centre as well as the skatepark and leisure centre.

3.4 In respect of cycling, the Local Transport Note LTN 1/20 'Cycle Infrastructure Design' (2020) considers a journey distance of five miles (or 8.0 kilometres) as an achievable distance to cycle for most people. Evidently, from Table 3.1 all the local education, employment, retail, civic health, and recreation facilities fall within this journey distance by cycle. Audley End railway station is also well within this journey distance threshold.

Active Travel Infrastructure

3.5 The Site is bounded on two sides by the existing PROW network, as shown in Figure 2, which comprises:

- PROW 18 (Byway) Thaxted Road – Bears Hall (along Tiptofts Lane)
- PROW 36 (Footpath) PROW 18 – Cole End

3.6 At the confluence of PROW 18 and PROW 36, and additional off-carriageway recreational route extends north-westwards to Shire Hill, PROW 19 (Bridleway).

3.7 In addition to the established PROW network, there is an existing formal lit, surfaced shared footway / cycleway that extends along the eastern side of Thaxted Road between the Knight Park and Peaslands Road for access towards Saffron Walden town centre. Formal, signal controlled crossing facilities are provided at the junction of the B184 Thaxted Road and Cardamon Road. Beyond Peaslands Road there are footways on both sides of the B184 Thaxted Road up towards Radwinter Road and the town centre.

3.8 There are consented works to the B184 Thaxted Road / Peaslands Road junction that comprise the conversion of the mini roundabout to traffic signal control incorporating improved pedestrian and cycle crossing facilities.

3.9 Most other residential streets in the local neighbourhood and northwards towards the town centre have footways on both sides of the carriageway. In general, crossing facilities are uncontrolled however controlled crossings are provided in locations where there is significant demand and in areas where there is an interaction with higher traffic demand.

3.10 In conjunction with the recently consented Land West of Thaxted Road (S62A/2022/0014), a comprehensive package of active travel improvements works is committed that will benefit the emerging development on the Site, which includes:

- The delivery of Phase 1 of the Multi-User Greenway from Thaxted Road to the Green Mile.
- A multi-user (pedestrian, cycle & equestrian) Pegasus Crossing at Tiptofts Lane to connect PROW 18 (Byway) to the Green Mile via the Orbital Greenway.

- A shared footway / cycleway on the western side of the B184 Thaxted Road that extends to Peaslands Road.
- Toucan Crossings at the B184 Thaxted Road / Cardamon Road junction.
- Funding for active travel improvements along the Peaslands Road / Mount Pleasant Road corridor along with additional wayfinding on the wider Saffron Walden pedestrian and cycle network.

Figure 2 Existing PROW Network

Public Transport Infrastructure

3.11 The nearest bus stops to the Site are as located on the B184 Thaxted Road outside Knight Park Retail Park. Both eastbound and westbound bus stops are within 400m walk distance (5-minute walk time) of the entire Site.

3.12 The Knight Park bus stops are served by the Stephensons of Essex Route 313 / 314 that connects Saffron Walden with Great Dunmow via Thaxted. This service operates on an hourly frequency in both directions during daytime hours, Monday to Saturday. Journey time to Saffron Walden town centre is 5 mins (Thaxted is 21 mins and Great Dunmow is 43 mins).

3.13 A demand-responsive bus service, known as Essex DaRT, also provides a timetabled service, F29, with three return journeys per day between Saffron Walden and Linton that stops at Knight Park.

3.14 Audley End railway station is located 4.9kms to the west of the Site, a cycle journey time of 18 minutes. Audley End railway station is managed by Greater Anglia and located on the West Anglia Main Line. The ticket office at the station is manned during daytime hours throughout the week. The station has 86 cycle storage spaces and 664 car parking spaces.

3.15 Audley End is served predominately by trains operated by Greater Anglia although a few CrossCountry services remain. Off peak frequencies are:

- Greater Anglia
  - 2 tph to London Liverpool Street (1 stopping, 1 semi-fast)
  - 2 tph to Cambridge North (1 stopping, 1 semi-fast)
  - 1 tph to Stansted Airport
  - 1 tph to Norwich via Cambridge

tph = trains per hour

- CrossCountry
  - 3tpd to Cambridge (fast) then Birmingham New Street
  - 3tpd to Stansted Airport

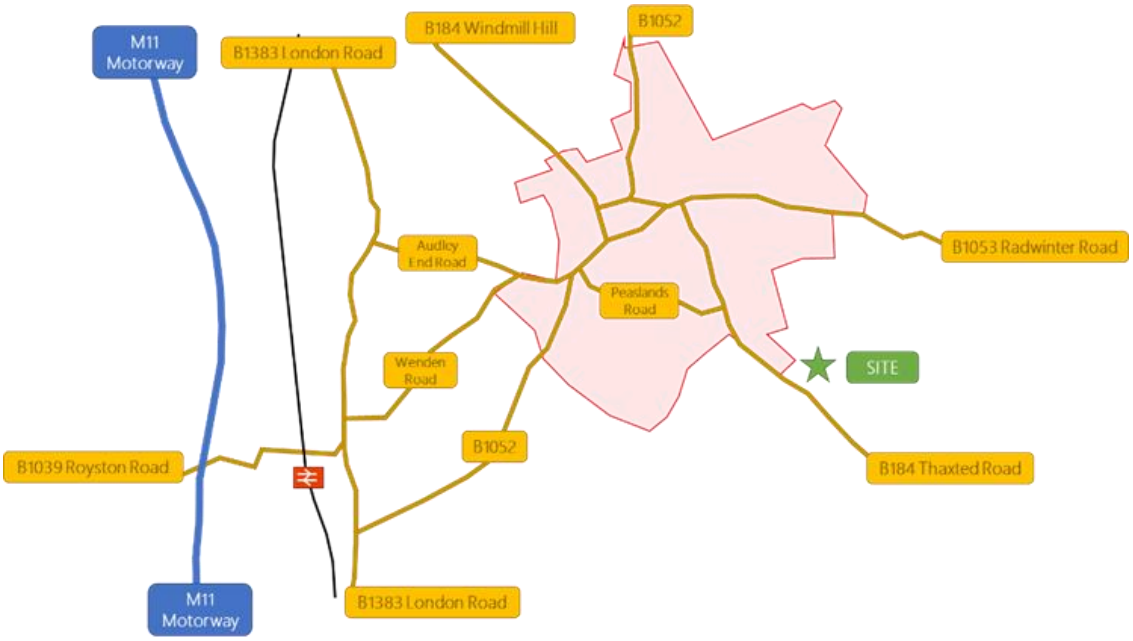
tpd = trains per day

Highway Network

3.16 Vehicular access to the Site from the surrounding highway network is by way of the existing spine road that leads from a give-way controlled junction with the B184 Thaxted Road through Knight Park. The spine road is a 7.3-7.5m wide single carriageway two-way road with a continuous lit footway on the northern side of the carriageway that connects with existing infrastructure along the B184 Thaxted Road corridor.

3.17 Figure 3 shows the key highway network in the vicinity of the Site.

Figure 3 Surrounding Highway Network



3.18 The B184 Thaxted Road which runs north-south from M11 J9a at Hinxton, through Saffron Walden town centre and Thaxted to the B1256 at Great Dunmow (with connections to the A120). The B184 Thaxted Road is a County Priority 1 (PR1) road and, in the immediate vicinity of the Site, is characterised as a single carriageway two-way road with street lighting and is subject to a 40mph speed limit.

3.19 To the north of the Site, the speed limit changes to 30mph just south of the Peaslands Road mini-roundabout and onwards through Saffron Walden town centre. To the south of Knight Park, the speed limit reverts to national speed limit (60mph) and the B184 Thaxted Road is more rural in terms of its characteristics.

3.20 In conjunction with the recently consented development to the east of Thaxted Road (LPA Ref. 19/2355) a traffic signal junction with pedestrian / cycle crossing facilities has been constructed immediately north-east of the Site on the B184 Thaxted Road. Cardamon Road is a new spine road through the consented development that will ultimately link through to the B1053 Radwinter Road.

3.21 Other side road junctions on the B184 Thaxted Road to Tiptofts Lane and Knight Park are give-way controlled priority junctions with ghosted right turn lane provision on the main carriageway.

Road Safety Analysis

3.22 Data collected as part of the recently consented Land West of Thaxted Road development (S62A/2022/0014) revealed that over the 5-year period from 1 July 2017 to 30 June 2022 there have been only two recorded accidents on the B184 Thaxted Road in the vicinity of the Site.

3.23 The first of the recorded PIA occurred in proximity of the B184 Thaxted Road junction with Tiptofts Lane where a motorcyclist failed to anticipate other members of the motorcycle group turning right and has fallen from the bike in taking avoiding action, resulting in a serious injury to the rider. The second recorded PIA involved a rear end shunt between two cars waiting to turn out of the Knight Park retail park resulting in a slight injury to the driver of the car in front.

3.24 Both PIAs occurred during fine, dry conditions in daytime hours, and it is evident from the descriptions provided of the incidents that there are no attributable factors to the road geometry, conditions, or characteristics. Overall, the B184 Thaxted Road in the vicinity of the Site has a very low accident record for the type of road and volumes of existing traffic using it.

4. Movement & Access Strategy

General Principles

4.1 As referenced in Section 1 of the TS, the development proposals on the Site comprise an outline planning application for up to 55 dwellings, associated landscaping and open space, with access from Knight Park. Only the principle of the proposed residential land use and the means of access are to be determined. Matters such as appearance, landscaping, layout, and scale are reserved for future determination.

4.2 Appendix 2 to the TS provides a copy of the illustrative masterplan for the Site. The illustrative masterplan options show delivery of public open and amenity space with residential dwellings in a landscape setting, incorporating the retention and enhancement of existing key tree and hedgerow boundaries to the Site as well as ecological enhancements.

4.3 In accordance with the Essex Design Guide (EDG) (2018), the sustainable development proposals will promote integration into the surrounding neighbourhoods, social cohesion, and active travel modes with the aim of realising a reduction in the need to travel. A hierarchical approach will be a guiding feature of the planning and design stages to ensure that priority is given to more sustainable forms of transport and opportunities to reduce travel demand over motor vehicle access.

4.4 The Development is supported by a comprehensive Movement & Access Strategy that seeks to deliver a good quality environment for all modes of travel to / from the Site that is:

- Attractive.
- Well-connected and permeable to encourage walking and cycling to local destinations.
- Able to encourage activity thereby improving personal security and safety.

4.5 Subject to planning approvals, the scale of development on the Site is such that construction will take no more than 12-18 months to complete. It is therefore anticipated that the full opening of the development will be no later than the 1st quarter of 2026.

Promoting Smarter Choices & Opportunities to Reduce Travel Demand

4.6 A commitment is made by the applicant to develop, implement, and monitor a comprehensive Framework Travel Plan (FTP) for the Site, working in partnership with the UDC / ECC to incorporate Smarter Choices measures and include the application of personalised travel planning techniques, marketing, and other behavioural change initiatives with the aim of sustaining these changes over the long term.

4.7 The FTP measures are planned to work alongside the delivery of physical improvements to the pedestrian, cycle & public transport environment to achieve modal shift, reduce the impact of traffic generated by the development, to improve accessibility, promote healthier lifestyle choices as well as wider social / community benefits and to assist in minimising the environmental impacts of the development.

4.8 The FTP will outline a commitment from the applicant to the appointment of a Travel Plan Coordinator (TPC) alongside the funding of measures / incentives identified within the FTP.

4.9 Such measures / incentives to be delivered by the Site include a community website, Travel Information Packs (TiPs), car sharing, promotional strategies, and personalised travel planning.

4.10 The TPC will be committed to setting of targets, monitoring & review, including bi-annual travel surveys to check performance against targets. Measurable targets and overriding objectives will be continuously monitored and reviewed over the lifetime of the Travel Plan. Review reports will be made available to UDC / ECC, and protocols will be established in agreement with UDC / ECC for corrective measures to be put in place if targets not met.

4.11 A copy of the FTP is submitted alongside this TS.

Access & Permeability for Active Travel

4.12 Within the Site, a network of formal and informal paths and recreational routes will connect the residential development to the green spaces and wildlife corridors. Local streets are recognised corridors that not only provide a permeable, legible circulation pattern but also have important functions beyond just the movement of traffic, i.e., multi-functional spaces with a much higher 'place' function that are integrated within their surroundings and where pedestrians and cyclists are, in general, afforded greater priority than vehicular traffic.

4.13 The freedom of movement for pedestrians and cyclists to directly access the broad range of local facilities and services surrounding the Site is a priority of the Movement & Access Strategy. The Site will deliver formal, surfaced paths linking the development through to Knight Park, taking advantage of the established and consented shared footway / cycleway network along the Thaxted Road corridor for access to local amenities and local bus stops. The formal, surfaced path network will also incorporate appropriate lighting and wayfinding.

4.14 Specifically, regarding the provision of new and improved active travel mode infrastructure, the Movement & Access Strategy comprises the following:

- The creation of a high-quality environment within the Site that provides direct connections to origins and destinations within the developable area and beyond that are permeable, coherent, safe and reflect the desire lines of movement.
- The provision of key landmarks as well as easy to understand wayfinding both within and on key routes to / from external destinations to provide legibility.
- The protection and enhancement of the Public Right of Way network in the immediate vicinity, integrated into the network of new infrastructure within the Site, accommodating the requirements for pedestrians, cyclists, and equestrian users.

4.15 Based on this framework, the aim is to:

- Provide a continuous network.
- Maximise convenience by ensuring that all routes are direct and reflect desire lines of movement.
- Ensure that usable, comfortable places are created and that crossing places are level.
- Make routes clear and easy to follow with good sightlines and signage.
- Create spaces that are safe, active, and accessible to all, including equestrian users.

4.16 The Movement & Access Strategy will deliver a 'walkable neighbourhood' with interconnected street patterns incorporating footway provision and where the daily needs of people within the area, such as work, play, education, and shopping are within walking distance to minimise any reliance on the use of the car.

4.17 All formal footways within the Site will be constructed to full highway standards with sealed asphalt surfaces and concrete edging. On some secondary and tertiary routes where there is no identified pedestrian desire line on one side of the street over a section, then footways may be omitted.

4.18 Hedges and fences to adjoining properties will be set back at least 0.5m from footways. Inter-visibility splays of 2m x 2m will be provided at crossovers, path junctions to maintain pedestrian safety.

4.19 Crime and the fear of crime can deter people from making trips by foot and cycle. In this regard, active travel corridors and user activity will be overlooked and generally concentrated on active frontages avoiding, where possible, routes to the rear of building plots and other blind spots.

4.20 Formal footway provision will be lit. All pathways will be accompanied by a legible signage strategy. Crossing points are intended to be uncontrolled and will tie in with desire lines of movement.

4.21 In general, the maximum desirable longitudinal gradient on the footway network within the Site will be 5.0% (1:20). Where natural steep changes in level are unavoidable, short sections may be constructed at 8.0% (1:12). Where these exist, flat platforms of at least 5.0m in length will be provided along its length.

4.22 Drainage will either be integrated into the wider highway solution or, where facilities are off carriageway, such as recreational paths, then drainage may be dealt with by a combination of French drains, rain gardens, natural ditches, and swales.

4.23 The opportunity exists for the Site to deliver protection to and enhancement of the PROW network in the immediate vicinity, integrated into a network of new formal active travel infrastructure within the Site itself.

4.24 In this regard, it is anticipated that PROW 18 (Byway) will form part of the Council's emerging Local Plan strategy to deliver a Multi-User Orbital Greenway around Saffron Walden. The vision for the Multi-User Orbital Greenway is to accommodate recreational pedestrian, cycle, and equestrian users.

4.25 The first phase of the delivery of the Multi-User Orbital Greenway has been established as part of the infrastructure works that have recently been consented on Land West of Thaxted Road (S62A/2022/0014), which also includes the delivery of a Pegasus Crossing on Thaxted Road close to its junction with Tiptofts Lane.

4.26 The opportunity exists as part of the emerging planning application strategy to deliver Phase 2 of the Multi-User Orbital Greenway through the upgrade of PROW 18 (Byway) to the specification secured through the consent on Land West of Thaxted Road (S62A/2022/0014).

4.27 It will be important that the Multi-User Orbital Greenway provides direct, convenient routes to any new green spaces (including Children's Play) and the semi-natural greenspaces in and around the Site. Strong landscape features, including the retention of existing hedgerows where possible, will also define the Multi-User Orbital Greenway.

4.28 The extent of the Phase 2 Multi-User Orbital Greenway infrastructure works will be a matter for agreement with both the Strategic Access Officer and the Highways Development Management teams at Essex County Council and will need to be directly related / scaled to the level of development to be delivered. It is not proposed to alter the alignment of the PROW.

Passenger Transport Services

4.29 A fundamental deliverable of the Site is to maximise potential public transport patronage by providing competitive journey times to key destinations that present a realistic alternative to private car use. In this regard the Site will deliver safe, direct access routes from the development to local bus stops. If required, the Site can also contribute toward the enhancement of infrastructure at local bus stops, potentially in terms of seating and Real-Time Passenger Information (RTPI).

4.30 In addition, the Site can contribute appropriate and proportionate funding for the delivery of weekday, Saturday and Sunday daytime and evening bus services directly serving the Site, Saffron Walden town centre and Audley End rail station. This funding will be pooled with other contributions secured from consented developments in the Saffron Walden area to cover the costs of running the future enhanced bus services within Saffron Walden.

Vehicle Access Strategy & Street Hierarchy

4.31 Plan 23075/001 included as Appendix 3 to the TA shows the proposed vehicular access arrangements to the Site that comprises the extension of the existing main spine road that extends through Knight Park into the Site on its south-western boundary. As referenced in Section 3 of the TS, the main spine road through Knight Park is a 7.3-7.5m wide single carriageway two-way road with a continuous lit footway on the northern side of the carriageway that connects with the B184 Thaxted Road by way of a give-way controlled priority junction.

4.32 From Plan 23075/001, it is proposed to extend the existing spine road some 10-15m to the Site boundary whereupon it is proposed to provide a gateway feature as a transition from the retail park to the residential development by way of a carriageway narrowing designed in accordance with the diagram under para. 6.88 of the Essex Design Guide (2018 Version 3).

4.33 In accordance with the Essex Design Guide – Highways Technical Manual (2018) the internal network within the Site is characterised by medium / high levels of pedestrian and cycle activity, frequent dropped kerbs to private driveways for frontage residential properties, and on-street parking designed sensitively to minimise visual intrusion and ensure high safety standards.

4.34 On this basis, the following street types will be incorporated into the internal network:

- Type E Access – 5.5m c'way with 2 x 2.0m footways (1 x 2.0m footway with less than 25 dwellings)
- Type F Minor Access – 6.0m shared surface (max. length 125m)
- Shared surface private drive – less than 5 dwellings 5.5m for 1st 6.0m then tapering down (min 3.0m)

4.35 Junction design within the internal street network will fit in the space between buildings / features. Dimensions are determined by the need to prioritise direct pedestrian desire lines and parameters are set using swept path analysis.

4.36 The internal street network will be designed to incorporate natural speed attenuation that will also include changes to surface treatment at features such as squares, gateways, junctions, crossings, and interfaces with key public open spaces to create focal points and promote legibility. The target maximum speed will be on the internal street network will be 20mph.

Parking Provision

Car Parking

4.37 The Site will deliver liveable streets that are not overly dominated by parked cars. Where on-street parking is provided, changes in surface material will be considered to provide definition and continuous lengths or no more than 5 spaces will be provided before being broken up by landscape / street furniture features.

4.38 Careful detailing in terms of the plot arrangement, frontages, landscape boundary treatments, street alignment and surface treatments will help to sensitively integrate vehicles into the layout. In general, the residential element of the development proposals will be provided with a mix of on and off-plot (on-street) parking.

4.39 Electric vehicle charging points (EVCPs) will be in easily accessible locations within the Site to ensure that future demand is accommodated. In identifying appropriate levels of EVCPs to be provided, account is taken of the view that most of the charging will take place at home and be done overnight.

4.40 All new car parking within the Site will fulfil a 'Passive' EVCP standard, i.e., underlying infrastructure provided for connection to be activated in the future as technologies evolve and uptake increases. A minimum of 20% of new parking will then have access to an 'Active' EVCP. Weather protection will also be provided for all outdoors EVCPs.

4.41 Parking provision within the subject site will adopt the Essex Parking Standards – Design & Good Practice (2009) guidance for Use Class C3: dwelling houses combined with local UDC parking standards for dwellings with 4+ bedrooms.

4.42 As part of the establishment of a district-wide Car Club initiative where funding is secured through the UDC Interim Climate Change Policy (2021), the Site will deliver one electric car club vehicle for which two on-street dedicated parking spaces will be provided. These spaces will be distributed evenly within the Site and be provided with the associated signage, carriageway markings and vehicle charging facilities.

Cycle Parking

4.43 Cycle parking is a key deliverable within the Site and provisions will accord with the Essex Parking Standards – Design & Good Practice (2009), recognising the need to prioritise this mode of travel over and above the use of the private car. In so doing, it is not just the quantity of cycle parking provided for each land use but also the quality of such provision in respect of location, convenience, and security.

4.44 For all dwellings within the Site, a minimum of one secure covered cycle parking space per dwelling will be provided. For houses where a garage meets the required minimum internal dimensions there will be no separate cycle parking provision. For flats, cycle parking will be grouped in one lockable storage area within the building.

4.45 The Site will also provide a Cycle Hire Hub located centrally within the development that provides up to 6 x electric bikes made available for the whole community for short-term hire. In addition, visitor cycle spaces will be provided, located in accessible, convenient locations throughout the site layout and provided at a ratio of 1 space per 8 dwellings.

Waste Collection & Emergency Vehicle Access

4.46 Each of the dwelling houses within the Site will be provided with individual, screened hard standing areas for the storing of refuse / recycling receptacles. Any flatted element will be provided with a centrally located secure bin store for residents to dispose of refuse / recycling.

4.47 Streets will be designed to ensure that refuse collection vehicles (RCVs) can enter, manoeuvre, and then exit in a forward gear. Where RCVs are required to use private drives for collection, then these will have to be designed to adoptable standards.

4.48 Collection points will be located no more than 30m from bin storage receptacles and no more than 20m from the edge of the adopted highway. Where communal bin storage receptacles are provided, these will be located no more than 10 metres from the edge of the public highway.

4.49 All dwellings will be within 45m of an internal access road providing adequate access for fire appliances.

5. Development-Related Trip Generation

Source Data & Methodology

5.1 To determine the likely trip generational characteristics of the emerging development proposals on the Site, an exercise has been undertaken to establish potential weekday daily and peak hourly person trip rates using the TRICS database (v 7.10.2) sub-category 'Houses Privately Owned'. Parameters included in the selection of sites from the TRICS database include:

- Sites in South-East England & East Anglia selected (all other regions & the Isle of Wight excluded).
- No. Dwellings Range: 30-120.
- Suburban, Edge of Town, Neighbourhood Centre, and Free-Standing locations only.
- Sites with a maximum population more than 100,000 within 5 miles excluded.
- Sites with a minimum of 70% private dwellings selected.
- Surveys undertaken during the COVID period excluded.

5.2 Based on this selection process, a total of fifteen sites have been included within the TRICS output, a copy of which is provided as Appendix 4 of the TS.

Derivation of Person Trips

5.3 Table 5.1 summarises the resultant weekday daily and peak hourly trip rates / resultant trip movements based on a residential development of up to 55 dwellings on the Site.

Table 5.1 Total Person Trips (All Modes)

Time Period	Trip Rate			Total Person Movements		
	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
AM Peak	0.229	0.713	0.942	13	39	52
PM Peak	0.605	0.290	0.895	33	16	49
Daily	3.841	3.928	7.769	211	216	427

Modal Split Calculation

5.4 To determine the potential modal split of person trips generated by the proposed development, reference is made to the 2011 Census Origin / Destination (O-D) data, specifically for the Uttlesford 002 MSOA (Middle Super Output Area) within which the Site is located.

5.5 The 2011 Census O-D data is included as Appendix 5 to the TS. Table 5.2 provides a summary of the baseline modal split for the proposed development based on the 2011 Census O-D data for Uttlesford 002 MSOA.

Table 5.2 Baseline Mode Split (based on 2011 Census O-D Data Uttlesford 002 MSOA)

Mode of Travel	Percentage Split	Total Trips (Daily)
Walk	21.1%	90
Cycle	1.4%	6
Public Transport – Bus	1.9%	8
Public Transport – Rail	7.0%	30
Vehicle Driver	62.8%	268
Vehicle Passenger	4.4%	19
Other (incl. taxi & m'cycle)	1.4%	6
TOTALS	100.0%	427

Breakdown of Person Trips by Mode

5.6 Based on a combination of the TRICS output and 2011 Census O-D data, Tables 5.3 – 5.5 provide a breakdown of anticipated person trips by mode of travel during the AM and PM peak hourly periods and over a daily period for the proposed development on the Site.

Table 5.3 Person Trips by Mode – AM Peak Hour

Mode of Travel	Arrivals		Departures		Two-Way	
	Trip Rate	No. Trips	Trip Rate	No. Trips	Trip Rate	No. Trips
Walk	0.048	3	0.150	8	0.199	11
Cycle	0.003	0	0.010	1	0.013	1
Public Transport – Bus	0.004	0	0.014	1	0.018	1
Public Transport – Rail	0.016	1	0.050	3	0.066	4
Vehicle Driver	0.144	8	0.448	24	0.592	32
Vehicle Passenger	0.010	1	0.031	2	0.041	2
Other (incl. taxi & m'cycle)	0.003	0	0.010	1	0.013	1
TOTALS	0.229	13	0.713	39	0.942	52

Table 5.4 Person Trips by Mode – PM Peak Hour

Mode of Travel	Arrivals		Departures		Two-Way	
	Trip Rate	No. Trips	Trip Rate	No. Trips	Trip Rate	No. Trips
Walk	0.128	7	0.061	3	0.189	10
Cycle	0.008	0	0.004	0	0.012	1
Public Transport – Bus	0.004	0	0.014	1	0.018	1
Public Transport – Rail	0.042	3	0.020	1	0.063	4
Vehicle Driver	0.380	21	0.182	10	0.562	31
Vehicle Passenger	0.027	2	0.013	1	0.039	2
Other (incl. taxi & m'cycle)	0.008	0	0.004	0	0.012	1
TOTALS	0.605	33	0.290	16	0.895	49

Table 5.5 Person Trips by Mode – Daily

Mode of Travel	Arrivals		Departures		Two-Way	
	Trip Rate	No. Trips	Trip Rate	No. Trips	Trip Rate	No. Trips
Walk	0.810	45	0.829	45	1.639	90
Cycle	0.054	3	0.055	3	0.109	6
Public Transport – Bus	0.073	4	0.075	4	0.148	8
Public Transport – Rail	0.269	15	0.275	15	0.544	30
Vehicle Driver	2.412	132	2.467	136	4.879	268
Vehicle Passenger	0.169	9	0.173	10	0.342	19
Other (incl. taxi & m'cycle)	0.054	3	0.055	3	0.109	6
TOTALS	3.841	211	3.928	216	7.769	427

Vehicular Trip Distribution

5.7 Using the 2011 Census O-D data for Uttlesford 002 MSOA, an exercise has been undertaken to establish the distribution of vehicle driver trips generated by the proposed development on the Site.

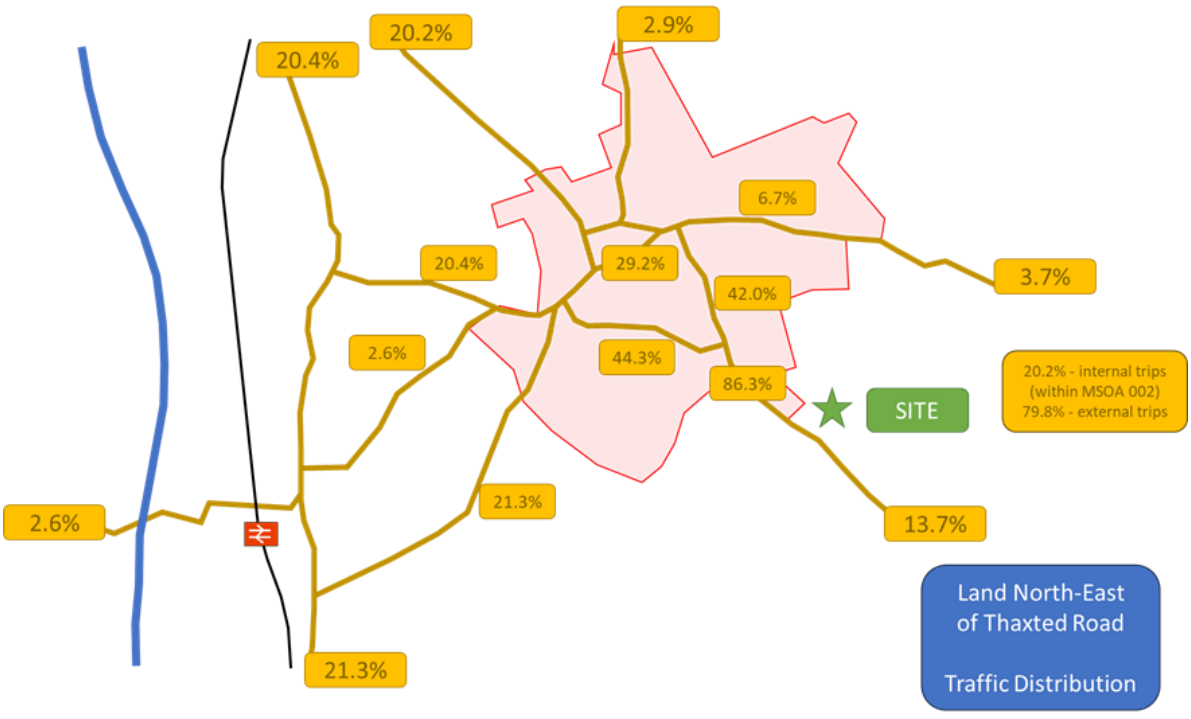
5.8 The routing assignment has been based on peak hour journey times and distances and where similar times and / or distances for multiple routes are available for a destination, then this has been assigned accordingly to reflect driver choice.

5.9 The routing assignment includes for internal trips within the Uttlesford 002 MSOA. It is therefore considered that the distribution model represents a robust approach. Appendix 6 to TS provides spreadsheet analysis of vehicle trip origins / destinations. Weekday AM and PM peak hourly arrivals and departures by direction are summarised in Table 5.6 and illustrated in Figure 4.

Table 5.6 Distribution of Development-Related Vehicle Trips

O/D Direction	% Split	AM Peak			PM Peak		
		To	From	Total	To	From	Total
B184 Thaxted Road	13.7%	1	3	4	3	1	4
B1053 Radwinter Road	6.7%	-	2	2	1	1	2
B1052 Little Walden Road	2.9%	-	1	1	1	-	1
B184 Windmill Hill	32.3%	3	7	10	7	3	10
Audley End Rd / B1383 London Rd	21.3%	2	5	7	4	2	7
Wenden Rd / B1039 Royston Rd	2.6%	-	1	1	1	-	1
B1052 Newport Rd / B1383 London Rd	20.4%	2	5	7	4	2	6
TOTALS	100.0%	8	24	32	21	10	31

Figure 4 Distribution of Development-Related Vehicle Trips



5.10 From Table 5.6 and Figure 4, the dispersal of development-related traffic is evident, particularly to the north of the Site where there is, in essence, an equal proportion of trips using the Peaslands Road corridor as there is on the B184 Thaxted Road towards the B1053 Radwinter Road.

5.11 Of note, there is no more than nine (9) vehicle movements through the town centre network during the weekday AM and PM peak hourly periods, equivalent to one vehicle movement every 6.7 minutes, even without taking account of any mode shift generated by the robust package of measures to respond to UDC's Climate Change Policy (2021).

6. Assessment of Impacts

Study Area

6.1 Based upon the trip generational and distributional characteristics of the emerging development proposals on the Site, an assessment of the impacts arising on the capacity, safety and operational characteristics of the surrounding highway network has been undertaken.

6.2 Given the limited vehicle trip generation and its dispersal across the network, the study area for this exercise is limited to the following key highway nodes:

- B184 Thaxted Road / Knight Park Retail Park give-way controlled priority junction.
- B184 Thaxted Road / Cardamon Road / Consented Access to Land West of Thaxted Road (S62A/2022/0014) traffic signal-controlled junction.
- B184 Thaxted Road / Peaslands Road existing mini-roundabout junction & consented traffic signal junction (UTT/21/2509/OP).

6.3 The extent of the study area is agreed with ECC, as Highway Authority, and confirmed in the pre-application response (ECC Ref. FS538162742 UTT) dated 21 September 2023.

Background Data Sources

6.4 To understand the operation of these key highway nodes within the study area, classified turning count (CTC) surveys were conducted in October 2022 as part of the Transport Assessment (TA) that accompanied the Land West of Thaxted Road (S62A/2022/0014) application.

6.5 A copy of the CTC surveys is included as Appendix 7 to the TS.

Committed Development & Future Assessment Year

6.6 It is proposed that a future year of 2028 will be adopted, being 5-years post the data of a planning application and appropriate TEMPRO growth rates are applied to baseline survey data to reflect future 'base' operational conditions.

6.7 These TEMPRO growth rates are factored, using the alternative assumptions tool, to take account of consented and committed development within the local area, as listed below:

- Land West of Thaxted Road (S62A/2022/0014)
- Land East of Little Walden Road (UTT/18/2959/DFO)
- Land North of Ashdon Road (UTT/17/3413/OP)
- Land South of Radwinter Road (UTT/21/2465/DFO)
- Land North of Shire Hill Farm (UTT/21/3565/DFO)
- Land South of Radwinter Road (east of Griffin Place) (UTT/21/2509)
- Land East of Thaxted Road (UTT/20/00078/REF)

- Land to rear of old Cement Works, Thaxted Road (UTT/20/0864/FUL)
- Land off Auton Croft (UTT/20/3354/FUL)
- Former Friends School, Mount Pleasant Road

6.8 The resultant TEMPRO growth factors for the AM and PM peak periods, included as Appendix 8 to the TS, apply the alternative assumptions to avoid double counting and to provide a more robust forecast than will be derived from TEMPRO rates for the Uttlesford 002 MSOA only.

6.9 Summary Traffic Flow diagrams are included as Appendix 9 to the TS, that include:

- Figure 1 2022 AM Peak (08:15-09:15hrs) Surveyed Network Flows
- Figure 2 2022 PM Peak (16:00-17:00hrs) Surveyed Network Flows
- Figure 3 2028 AM Peak (08:15-09:15hrs) Base Flows
- Figure 4 2028 PM Peak (16:00-17:00hrs) Base Flows
- Figure 5 AM Peak Committed Development Flows
- Figure 6 PM Peak Committed Development Flows
- Figure 7 2028 AM Peak (08:15-09:15hrs) Base + Committed Flows
- Figure 8 2028 PM Peak (16:00-17:00hrs) Base + Committed Flows
- Figure 9 Development Trip Distribution
- Figure 10 AM Peak Development Flows
- Figure 11 PM Peak Development Flows
- Figure 12 2028 AM Peak (08:15-09:15hrs) Base + Committed + Development Flows
- Figure 13 2028 PM Peak (16:00-17:00hrs) Base + Committed + Development Flows

Highway Network Link & Junction Capacity Overview

6.10 Analysis has been undertaken to make a comparison between future forecast year 2028 *'Base+ Committed'* and 2028 '*Base + Committed + Development'* traffic conditions on the highway network within the vicinity of the Site.

6.11 The purpose of this analysis is to establish the potential impact of development-related traffic flows during the weekday AM and PM peak periods with a combination of peak traffic demands generated by the proposed development and on the highway network itself.

6.12 Table 6.1 provides a comparison between 2028 weekday AM and PM peak *'Base+ Committed'* and *'Base + Committed + Development'* two-way traffic flows on critical highway links within the agreed study area that will experience changes in traffic flow levels as a result of the development proposals on the Site.

Table 6.1 Changes in Future Year (2028) Two-Way Highway Link Flows

Highway Link	AM Peak				PM Peak			
	Base + Comm	Base + Comm + Dev	Changes (No.)	Changes (%)	Base + Comm	Base + Comm + Dev	Changes (No.)	Changes (%)
B184 Thaxted Rd (sth of Knight Park)	437	441	+4	+0.9	493	497	+4	+0.8
B184 Thaxted Rd (nth of Knight Park)	579	607	+28	+4.8	733	760	+27	+3.7
B184 Thaxted Rd (sth of Peaslands Rd)	754	782	+28	+3.7	900	927	+27	+3.0
Peaslands Rd	851	865	+14	+1.6	899	913	+14	+1.6
B184 Thaxted Rd (nth of Peaslands Rd	885	899	+14	+1.6	963	976	+13	+1.3

6.13 Based on DMRB Vol 5 Sec 1 TA79/99, the B184 Thaxted falls within the UAP2 road type that has a two-way highway link capacity of 2,100 vehicles per hour. Peaslands Road falls within the UAP3 road type within TA79/99 and has a two-way highway link capacity of 1,850 vehicles per hour.

6.14 From Table 6.1 the maximum two-way flow on the B184 Thaxted Road, with development, is 976 vehicles in the PM peak period. It is therefore evident that the B184 Thaxted Road will continue to operate at less than 47% of its highway link capacity, even with the additional traffic demand generated by the proposed development on the Site.

6.15 The maximum two-way flow on Peaslands Road, with development, is 913 vehicles in the PM peak period. Peaslands Road will therefore continue to operate at less than 50% of its highway link capacity, even with the additional traffic demand generated by the proposed development on the Site.

6.16 In the context of all the highway links within the agree study area, it is generally regarded that daily changes in vehicle numbers can fluctuate by as much as 10% on any given highway link. In the context of paragraph 111 of the NPPF, the cumulative impact of the proposed development on the Site on highway link operational characteristics is not severe.

B184 Thaxted Road / Knight Park Junction

6.17 The operation of the B184 Thaxted Road / Knight Park junction has been modelled using PICADY based on the weekday AM and PM peak hourly periods under the scenarios detailed in Paragraph 6.9. For the purposes of the TS the following two scenarios are analysed:

- 2022 'Surveyed Flows'; and
- 2028 'Base + Committed + Development Flows'.

6.18 Tables 6.2 demonstrates that the B184 Thaxted Road / Knight Park junction will operate within capacity during the AM and PM peak periods and that any impact arising from development proposals can be accommodated. The full output is included as Appendix 10.

Table 6.2 B184 Thaxted Road / Knight Park Junction

Arm	AM Peak				PM Peak			
	2022 Base		2028 Base + CD + Dev		2022 Base		2028 Base + CD + Dev	
	RFC	Queue (Veh)	RFC	Queue (Veh)	RFC	Queue (Veh)	RFC	Queue (Veh)
Knight Park (Left)	0.06	0.1	0.07	0.1	0.16	0.2	0.17	0.2
Knight Park (Right)	0.17	0.2	0.23	0.3	0.37	0.6	0.42	0.7
B184 Thaxted Rd (S)	0.06	0.1	0.06	0.1	0.07	0.1	0.08	0.1
JUNCTION DELAY (S)	1.88		2.13		3.63		3.77	

B184 Thaxted Road / Cardamon Road / Consented Access to Land West of Thaxted Road Junction

6.19 The operation of the B184 Thaxted Road / Cardamon Road / Consented Access to Land West of Thaxted Road (S62A/2022/0014) traffic signal-controlled junction has been modelling using LINSIG based on the weekday AM and PM peak hourly periods for the 2028 *'Base + Committed Development'* and '*Base + Committed Development + Development*' scenarios.

6.20 Of note, as part of planning application S62A/2022/0014), two alternative stage sequences were identified for the future operation of the junction, with *"The final stage sequencing to be implemented can be determined at the detailed design stage…"*.

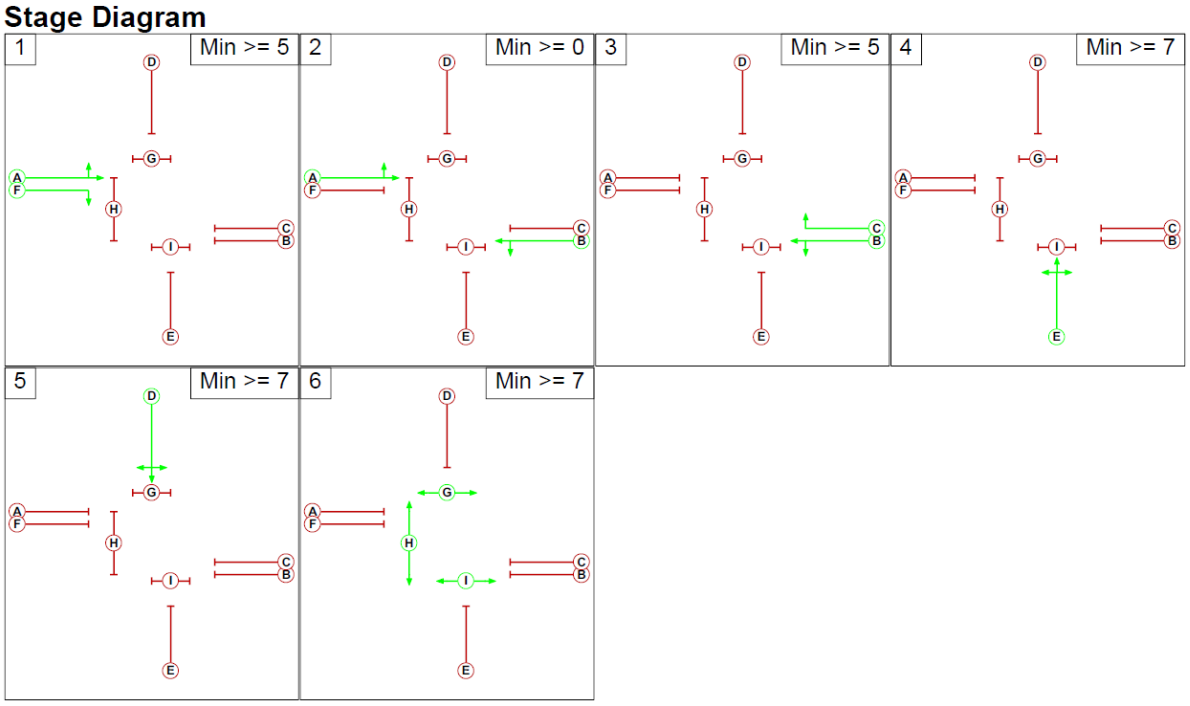
6.21 Figure 5 reveals the two alternative stage sequences proposed where the differences related to the operation of the right turning movements on the B184 Thaxted Road where Option 1 is an overlapping arrangement and Option 2 is a combined right turn arrangement.

6.22 Both stage sequences assume double-cycling where the B184 Thaxted Road approaches will run in both cycles and where the MOVA operational technology will call up the other stages dependent upon demand. In both stage sequences it is noted that the Toucan crossing facilities will be combined into a single '*all-red*' stage within the sequence.

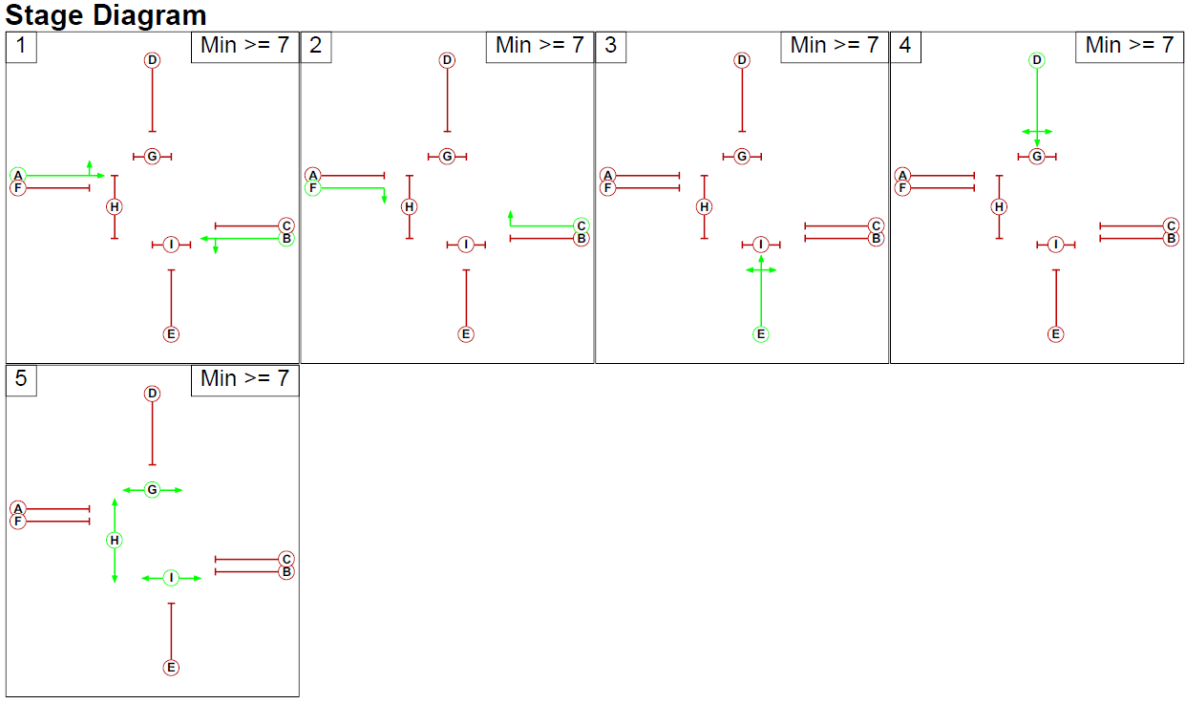
6.23 For the purposes of the TS, both sets of stage sequencing have been assessed.

Figure 5 B184 Thaxted Road / Cardamon Road / Site Access Stage Sequencing

Option 1 – *'Overlapping'*



Option 2 – Combined Right Turns



Overlapping Staging Arrangement

6.24 Table 6.3, and Appendix 11, provides a summary of the modelling undertaken for the B184 Thaxted Road / Cardamon Road / Consented Access to Land West of Thaxted Road (S62A/2022/0014) traffic signal-controlled junction with the Option 1 overlapping arrangement.

6.25 In all modelling scenarios, the cycle time has been optimised to produce the most efficient results in terms of delays and minimal queue lengths. In this regard there will be approach arms where the Degree of Saturation value is close to but does not exceed 85% in order to achieve these objectives. This is how the MOVA system would operate the junction through the controller specification.

6.26 A lower Degree of Saturation on these approach arms can be achieved through increase cycling times but this can be to the detriment of delays and queue lengths. A balance is therefore struck in this regard to produce the optimal results.

Table 6.3 B184 Thaxted Rd / Cardamon Rd / Land West of Thaxted Rd – Overlapping Staging

Arm	AM Peak				PM Peak			
	2028 Base + CD		2028 Base + CD + Dev		2028 Base + CD		2028 Base + CD + Dev	
	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue
B184 (S) (Ahead / Left)	37.1	7.1	39.9	7.8	38.2	8.9	39.1	9.1
B184 (S) (Right)	21.6	1.0	21.6	1.0	7.6	0.3	7.6	0.3
Land West of Thaxted Rd (All Movements)	44.2	4.7	44.2	4.7	34.9	1.6	34.9	1.6
B184 (N) (Ahead / Left)	43.7	6.5	44.4	6.7	52.1	10.0	54.0	10.5
B184 (N) (Right)	28.0	1.3	28.0	1.3	40.7	3.0	40.7	3.0
Cardamon Rd (All Movements)	44.0	3.9	44.0	3.9	52.6	4.5	52.6	4.5
PRC (%)	103.7		102.5		71.1		66.5	
Cycle Time (secs)	180		180		180		180	
Delay (pcu/hr)	9.67		9.90		10.00		10.22	

6.27 It is evident from Table 6.3 that the traffic signal-controlled junction will operate within capacity during the AM and PM peak periods and that any impact arising from development proposals can be accommodated.

6.28 Queue lengths can be accommodated within the storage capacity between the stoplines at the proposed junction and downstream junctions on the B184 Thaxted Road corridor without causing any blocking back.

B184 Thaxted Road – Site Access (Combined Right Turn Staging Arrangement)

6.29 Table 6.4, and Appendix 12, provides a summary of the modelling undertaken for the B184 Thaxted Road / Cardamon Road / Consented Access to Land West of Thaxted Road (S62A/2022/0014) traffic signal-controlled junction with the Option 2 combined right turn arrangement.

6.30 Again, the cycle time has been optimised to produce the most efficient results in terms of delays and minimal queue lengths.

Table 6.4 B184 Thaxted Rd / Cardamon Rd / Land West of Thaxted Rd – Combined Right Turn Staging

Arm	AM Peak				PM Peak			
	2028 Base + CD		2028 Base + CD + Dev		2028 Base + CD		2028 Base + CD + Dev	
	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue
B184 (S) (Ahead / Left)	34.3	9.8	36.7	10.6	33.4	9.6	33.9	9.9
B184 (S) (Right)	28.8	1.3	28.8	1.3	5.1	0.4	5.1	0.4
Land West of Thaxted Rd (All Movements)	38.7	6.0	38.7	6.0	46.6	2.3	46.6	2.3
B184 (N) (Ahead / Left)	39.2	11.5	39.9	11.7	47.8	15.1	49.2	15.8
B184 (N) (Right)	37.3	1.7	37.3	1.7	47.5	4.0	47.5	4.0
Cardamon Rd (All Movements)	38.4	2.6	38.4	2.6	46.8	3.0	48.8	3.1
PRC (%)	129.7		125.8		88.4		83.1	
Cycle Time (secs)	240		240		240		240	
Delay (pcu/hr)	11.15		11.44		10.66		10.90	

6.31 It is evident from Table 6.4 that the traffic signal-controlled junction will operate within capacity during the AM and PM peak periods and that any impact arising from development proposals can be accommodated; based on the combined right turn staging arrangement.

6.32 Queue lengths can be accommodated within the storage capacity between the stoplines at the proposed junction and downstream junctions on the B184 Thaxted Road corridor without causing any blocking back.

Summary

6.33 Comparing the results between the two alternative approaches, it is considered that the overlapping staging arrangement will yield better results and greater capacity, with the benefit of an average shorter cycle time.

B184 Thaxted Road / Peaslands Road Junction

6.34 The existing mini-roundabout junction between the B184 Thaxted Road and Peaslands Road has been assessed using ARCADY based on the weekday AM and PM peak hourly periods under the scenarios detailed in Paragraph 6.9. For the purposes of the TS the following two scenarios are analysed:

- 2022 'Surveyed Flows'; and
- 2028 'Base + Committed + Development Flows'.

6.35 Tables 6.5 demonstrates that the B184 Thaxted Road / Knight Park junction will operate within capacity during the AM and PM peak periods and that any impact arising from development proposals can be accommodated. The full output is included as Appendix 13.

Table 6.5 B184 Thaxted Road / Peaslands Road – Existing Mini-Roundabout

Arm	AM Peak				PM Peak			
	2022 Base		2028 Base + CD + Dev		2022 Base		2028 Base + CD + Dev	
	RFC	Queue (Veh)	RFC	Queue (Veh)	RFC	Queue (Veh)	RFC	Queue (Veh)
B184 Thaxted Rd (N)	0.36	0.6	0.46	0.9	0.49	0.9	0.65	1.8
B184 Thaxted Rd (S)	0.33	0.5	0.55	1.2	0.37	0.6	0.51	1.0
Peaslands Road	0.55	1.2	0.68	2.1	0.53	1.1	0.71	2.4
JUNCTION DELAY (S)	7.68		10.70		7.99		12.51	

6.36 In conjunction with the planning application UTT/21/2509/OP (South of Radwinter Road (East of Griffin Place) (233 Dwellings)), it is proposed to convert the B184 Thaxted Road / Peaslands Road junction to traffic signal control. Based on the scheme proposals as presented in the TA submitted with the planning application a LINSIG model has been prepared to assess the performance of the consented traffic signals junction.

6.37 The assessment of the B184 Thaxted Road / Peaslands Road consented traffic signals junction is assessed based upon the weekday AM and PM peak hourly periods for the 2028 *'Base + Committed Development'* and '*Base + Committed Development + Development*' scenarios. Results are summarised in Table 6.6 with the full summary of the results provided as Appendix 14.

Table 6.6 B184 Thaxted Road / Peaslands Road – Consented Signals

Arm	AM Peak				PM Peak			
	2028 Base + CD		2028 Base + CD + Dev		2028 Base + CD		2028 Base + CD + Dev	
	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue	Deg. Sat. (%)	Queue
B184 Thaxted Rd (N) (Ahead & Right)	64.6	6.2	66.5	6.3	71.5	7.7	71.5	7.8
B184 Thaxted Rd (S) (Ahead & Left)	60.6	6.0	63.2	6.4	54.0	5.2	52.8	5.2
Peaslands Rd (Left & Right)	65.9	10.3	66.3	10.4	70.2	11.3	73.4	12.0
PRC (%)	36.6		35.4		25.8		22.7	
Cycle Time (secs)	90		90		90		90	
Delay (pcu/hr)	11.25		11.66		12.73		13.04	

6.38 From the results in Tables 6.5 and 6.6 above it is evident that the proposed development has an insignificant impact on the operation of the B184 Thaxted Road / Peaslands Road based on future year 2028 '*Base + Committed Development*' and '*Base + Committed Development + Development*' scenarios. This conclusion is the same for both the current configuration as a mini-roundabout junction as well as its future configuration based on the consented traffic signals scheme.

7. Summary & Conclusions

Summary

7.1 This Transport Statement (TS) has been prepared on behalf of Kier Ventures Limited to consider the highways and transport matters associated with an outline planning application submitted to the Secretary of State for determination under Section 62A of the Town & Country Planning Act (1990) on land to the north of Thaxted Road, Saffron Walden (the "Site"). The application description is as follows:

> *"Outline planning application for development of the site for up to 55 dwellings, associated landscaping and open space, with access from Knight Park."*

7.2 A key part of the vision for the emerging development proposals is to deliver a new neighbourhood that embraces the principles of healthy living, sustainability with high quality and well-designed public realm.

7.3 The Site is to be a place that connects with the rest of Saffron Walden with pleasant multi-user active travel routes as well as delivering convenient links to the countryside on its doorstep coupled with good public transport links. The layout of the new neighbourhood is designed such that it is more convenient and navigable for people to choose to walk and cycle rather than using the private car.

7.4 The implications of development related travel on the operational and safety characteristics of the surrounding highway and transport networks have been comprehensively considered within the TS.

7.5 The TS has demonstrated that in terms of Planning Policy at both National and Local level and through a deliverable package of interventions including a robust Movement & Access Strategy, Framework Travel Plan as well as a comprehensive package of on and off-site sustainable transport and highway improvement measures, travel demand generated by the Site can be accommodated on the surrounding highways and transport networks up to and beyond the full completion of the proposed development.

Conclusions

7.6 There are a number of day-to-day facilities within the walkable neighbourhood of the Site including local primary schools, the Knight Park retail park as well as the skatepark and leisure centre.

7.7 The Site benefits from its proximity to a number of off-carriageway paths that directly connect to the neighbouring area, including publicly maintainable paths. All the local education, employment, retail, civic, health and recreation facilities, as well as Audley End station, are within cycling distance of the Site.

7.8 A shared footway / cycleway extends along the eastern side of Thaxted Road between the Knight Park and Peaslands Road for access towards Saffron Walden town centre. Formal, signal controlled crossing facilities are provided at the junction of the B184 Thaxted Road and Cardamon Road. Beyond Peaslands Road there are footways on both sides of the B184 Thaxted Road up towards Radwinter Road and the town centre.

7.9 There are consented works on the highway network in the vicinity of the Site that include:

- The conversion of the B184 Thaxted Road / Peaslands Road junction to traffic signal control incorporating improved pedestrian and cycle crossing facilities.

- The delivery of Phase 1 of the Multi-User Greenway from Thaxted Road to the Green Mile.
- A multi-user (pedestrian, cycle & equestrian) Pegasus Crossing at Tiptofts Lane to connect PROW 18 (Byway) to the Green Mile via the Orbital Greenway.
- A shared footway / cycleway on the western side of the B184 Thaxted Road that extends to Peaslands Road.
- Toucan Crossings at the B184 Thaxted Road / Cardamon Road junction.
- Funding for active travel improvements along the Peaslands Road / Mount Pleasant Road corridor along with additional wayfinding on the wider Saffron Walden pedestrian and cycle network.

7.10 Most other residential streets in the local neighbourhood and northwards towards the town centre have footways on both sides of the carriageway. In general, crossing facilities are uncontrolled however controlled crossings are provided in locations where there is significant demand and in areas where there is an interaction with higher traffic demand.

7.11 The nearest bus stops are within 400m walk distance (5-minute walk time) of the entire Site, being located on the B184 Thaxted Road outside Knight Park that are served by Route 313 / 314 that connects Saffron Walden with Great Dunmow via Thaxted on an hourly frequency in both directions during daytime hours, Monday to Saturday. These bus stops are also served by a demand-responsive bus service, F29, that provides three return journeys per day between Saffron Walden and Linton.

7.12 Audley End railway station is located 4.9kms to the west of the Site, a cycle journey time of 18 minutes. Audley End railway station is managed by Greater Anglia and located on the West Anglia Main Line.

7.13 The B184 Thaxted Road is a County Priority 1 (PR1) road and, in the immediate vicinity of the Site, is characterised as a single carriageway two-way road with street lighting and is subject to a 40mph speed limit. Both Tiptofts Lane and Knight Park are give-way controlled priority junctions with ghosted right turn lane provision on the main carriageway.

7.14 In conjunction with the recently consented development to the east of Thaxted Road (LPA Ref. 19/2355) a traffic signal junction with pedestrian / cycle crossing facilities has been constructed immediately north-east of the Site on the B184 Thaxted Road. Cardamon Road is a new spine road through the consented development that will ultimately link through to the B1053 Radwinter Road. This junction will also provide access to the recently consented Land West of Thaxted Road development (S62A/2022/0014).

7.15 The B184 Thaxted Road / Peaslands Road mini-roundabout is to be converted to a traffic signal controlled junction in conjunction with the recently consented development on Land South of Radwinter Road (East of Griffin Place) (LPA Ref. 21/2509). The B184 Thaxted Road continues north to a traffic signal controlled junction with the B1053 Radwinter Road.

7.16 Road safety records supplied by ECC for the section of the B184 Thaxted Road from south of the Knight Park access to north of the Peaslands Road junction show that there have been only two recorded accidents over the most recent 5-year period.

7.17 The Movement and Access Strategy for the site adopts a hierarchical approach, ensuring that priority is given to more sustainable forms of transport and opportunities to reduce travel demand over motor vehicle access.

7.18 The Movement & Access Strategy is a series of tailored transport solutions to ensure that the future community within the Site are fully accessible but also ensures efficient, reliable, and legible travel connections to local amenities and Saffron Walden town centre, encouraging sustainable travel choices and removing physical and psychological barriers to movement. Key deliverables of the Movement & Access Strategy are:

- Measures to reduce the need to travel and a broad range of local services and facilities within a walkable and cyclable neighbourhood.
- Travel Plan measures and incentives including community website, travel information packs, car sharing promotional strategies.
- Cycle parking in accordance with the Essex Parking Standards – Design & Good Practice (2009) guidance for all land uses within the Site.
- Integration of Car Club operation within the development
- Inclusion of electric vehicle charging in accordance with the Essex Parking Standards – Design & Good Practice (2009) guidance standards for all land uses within the Site.
- Speed attenuation measures on the internal street network
- Funding to facilitate improvements to the Saffron Walden town centre bus service as well as enhanced passenger transport connections to Audley End railway station.
- Additional wayfinding on the wider Saffron Walden pedestrian and cycle network

7.19 The proposed vehicular access arrangements to the Site comprise the extension of the existing main spine road that extends through Knight Park into the Site on its south-western boundary. It is proposed to extend the existing spine road some 10-15m to the Site boundary whereupon it is proposed to provide a gateway feature as a transition from the retail park to the residential development by way of a carriageway narrowing designed in accordance with the diagram under para. 6.88 of the Essex Design Guide (2018 Version 3).

7.20 In accordance with the Essex Design Guide – Highways Technical Manual (2018) the internal network within the Site is characterised by medium / high levels of pedestrian and cycle activity, frequent dropped kerbs to private driveways for frontage residential properties, and on-street parking designed sensitively to minimise visual intrusion and ensure high safety standards.

7.21 Junction design within the internal street network will fit in the space between buildings / features. Dimensions are determined by the need to prioritise direct pedestrian desire lines and parameters are set using swept path analysis.

7.22 The internal street network will be designed to incorporate natural speed attenuation that will also include changes to surface treatment at features such as squares, gateways, junctions, crossings, and interfaces with key public open spaces to create focal points and promote legibility. The target maximum speed will be on the internal street network will be 20mph.

7.23 Each of the dwelling houses within the Site will be provided with individual, screened hard standing areas for the storing of refuse / recycling receptacles. Any flatted element will be provided with a centrally located secure bin store for residents to dispose of refuse / recycling.

7.24 Streets will be designed to ensure that refuse collection vehicles (RCVs) can enter, manoeuvre, and then exit in a forward gear. Refuse collection points will be located no more than 25m from the adopted public highway and no more than 30m from the furthest dwelling. Where communal bin storage receptacles are provided, these will be located no more than 10 metres from the edge of the adopted public highway.

7.25 Fire tenders will be able to reach within 45m of the furthest part of the ground floor of the furthest building.

7.26 The trip generational characteristics of the Site have been assessed using appropriate survey data from analogous sites contained within the TRICS database. Based on a development of up to 55 residential dwellings, the Site will generate a total of 49-52 total two-way person trips, by all modes of travel, during the weekday AM and PM peak periods and 472 total two-way person trips over a weekday daily period.

7.27 The modal split of person trips generated by the Site has been determined using 2011 Census Origin / Destination (O-D) data for the Uttlesford 002 MSOA (Middle Super Output Area) within which the Site is located that yields a 62.8% vehicle driver mode split. No adjustment has been made to the Census-based mode splits to reflect Travel Plan targets.

7.28 Based on a combination of the TRICS output and Census O-D data, the Site will generate 32 two-way vehicle movements in the weekday AM peak hourly period (8 arrivals / 24 departures). In the weekday PM peak hourly period the Site will generate 31 two-way vehicle movements (21 arrivals / 10 departures).

7.29 The Census O-D data has also been used to establish the distribution of vehicle driver trips where the routing assignment is based on peak hour journey times and distances. Where similar times and / or distances for multiple routes are available for a destination, the assignment reflects driver choice. The routing assignment includes for internal trips within the Uttlesford 002 MSOA.

7.30 From this exercise it is noted that the Site will generate no more than nine (9) additional vehicle movements through the town centre network during the weekday AM and PM peak hourly periods, equivalent to one vehicle movement every 6.7 minutes.

7.31 An assessment of impacts arising from development-related vehicular trips on the capacity, safety and operational characteristics of the surrounding highway network has been undertaken. Given the limited vehicle trip generation and its dispersal across the network, the study area, as agreed with ECC through pre-application dialogue, is limited to the B184 Thaxted Road junctions with Knight Park, Cardamon Road (including the consented access to Land West of Thaxted Road) and Peaslands Road (both the existing mini-roundabout junction & consented traffic signal junction).

7.32 The assessment of impacts is based upon classified turning count (CTC) surveys were conducted in October 2022 and are based on a future year of 2028, being 5-years post the data of a planning application. Appropriate TEMPRO growth rates are applied to baseline survey data to reflect future 'base' operational conditions that are factored, using the alternative assumptions tool, to take account of consented and committed development within the local area.

7.33 The assessment of impacts makes a comparison between future forecast year 2028 'Base+ Committed' and 2028 'Base + Committed + Development' traffic conditions on the highway network within the vicinity of the Site.

7.34 An assessment of highway link flows reveals that both the B184 Thaxted Road and Peaslands Road will operate within 50% of their respective link capacity, even with the additional traffic demand generated by the proposed development on the Site.

7.35 The maximum two-way flow on Peaslands Road, with development, is 917 vehicles in the PM peak period. Peaslands Road will therefore continue to operate at less than 50% of its highway link capacity, even with the additional traffic demand generated by the proposed development on the Site. In the context of paragraph 111 of the NPPF, the cumulative impact of the proposed development on the Site on highway link operational characteristics is not severe.

7.36 The assessment of impacts at B184 Thaxted Road / Knight Park reveals that the junction will continue to operate within capacity with minimal queues and delays under both future forecast year 2028 'Base+ Committed' and 2028 'Base + Committed + Development' traffic conditions. The impacts on queues and delays arising from additional traffic demand generated by the proposed development on the Site is minimal.

7.37 Similarly, there is minimal impact on the operation of the B184 Thaxted Road junctions with Cardamon Road and Peaslands Road under both future forecast year 2028 'Base+ Committed' and 2028 'Base + Committed + Development' traffic conditions.

Overall Conclusion

7.38 Based on the findings within this Transport Statement and in the context of the guidelines within para. 111 of the NPPF, it is considered that there are no residual cumulative impacts in terms of highway safety or the operational capacity of the surrounding road network and therefore planning permission should not be withheld on transport grounds.

Appendix 1

HIGHWAYS PRE-APP CONSULTATION (ref. FS-Case-538162742 UTT)
Site address: **Land to North-East of Thaxted Road, Saffron Walden**
Site number: 57218
Date of advice: 21/09/2023

1. Introduction

A pre-application advice request was submitted to ECC on 9th August 2023 along with a Pre-application Technical Note (dated August 2023) with 5 appendices.

A pre-application meeting was held on 25th August 2023 attended by Rachel McKeown – Strategic Development Engineer at Essex County Council and Matt Stevens – Milestone Transport Planning. Further consultation was undertaken with the Public Rights of Way team following the meeting.

The proposed development is for up to 70 residential dwelling units of mixed size and tenure.

The site is located to the south-east of Saffron Walden on land to the north-east of Thaxted Road (alternatively: land to the rear of Knight Park retail park), Saffron Walden. Thaxted Road (B184) is a PR1 road. The site is split into two parts by byway 18 (Saffron Walden 44).

2. Active Travel

It is noted and welcomed that the proposed development would protect and enhance the existing public right of way network and integrate this into a network of active travel infrastructure within site.

We would welcome further details with the application of walking and cycling routes within site and within the vicinity of the site. The applicant should consider opportunities for improving active travel routes to key services/destinations and public transport facilities as part of the application.

Table 3.1 of the Technical Note details the proximity of local amenities, we would welcome confirmation of where the distance is measured from and that it is not 'as the crow flies.'

It is noted and welcomed that the proposed development would include 'phase 2' of the multi-user orbital greenway where phase 1 has been secured for the development on the land west of Thaxted Road. The applicant should note that the Phase 1 section is not a public right of way and thus it may not be appropriate for the same specification to apply.

3. Buses

It is noted and welcomed that the proposed development would provide safe, direct access routes from residential dwellings to local bus stops (northbound and southbound on Thaxted Road, stop name: Tiptofts Lane). Clarity on those walking routes and the distance from the proposed dwellings to the stops should form part of the application.

We would welcome the enhancement of infrastructure at the northbound and southbound bus stops. It is likely that each stop would require an Essex-standard shelter, 28" in-shelter display for real-time passenger information, flag, timetable and clearway plate attached to shelter, bus stop clearway markings on carriageway, and power connections. A commuted sum would also be charged for future maintenance of the real-time passenger information. The extent of the enhancement required would be agreed an application stage taking into account existing infrastructure and committed improvements.

We would also likely collect a contribution towards improving bus services in the event permission is granted. Again, the value of the contribution sought would be confirmed at application stage taking into account the service at that time, the scale of development and any other service contributions.

4. Vehicular access

Two vehicular access options were presented and discussed. It is noted that the applicant does not own the land required for either access route.

1. Access to be taken via Knight Park retail park

2. Access to be taken from Cardamon Road

Both options presented for vehicular access would result in vehicles crossing byway 18 (Saffron Walden 44) which would be unacceptable to the highway authority. An alternative option would be for each parcel of the site to be accessed from its own access – thereby avoiding vehicles crossing the byway. Neither of the options presented seems unacceptable in terms of providing access to residential dwellings.

A Stage 1 Road Safety Audit of the access arrangements should be undertaken and submitted with the planning application, accompanied by the designers' response

Tracking should be provided for vehicles accessing site, including an Uttlesford refuse vehicle (10.3m)

5. Internal Layout

We were not provided with plans of the internal layout of site and it was not discussed at our meeting beyond noting that the application would likely be submitted for outline permission with layout a reserved matter. The layout would likely be designed to adoptable standards which we would welcome. The applicant should refer to the Essex Design Guide's Highways Technical Manual when designing the internal layout of the site.

Parking should be provided in accordance with Essex Parking Standards, and Uttlesford's Local Residential Parking Standards, including EV charging points as necessary.

6. Traffic modelling

The Technical Note sets out at paragraph 6.2 that the following 'key highway nodes' will be modelled, we agree that modelling these three nodes would be appropriate:

- B184 Thaxted Road / Knight Park Retail Park give-way controlled priority junction

- B184 Thaxted Road / Cardamon Road / Consented Access to Land West of Thaxted Road (S62A/2022/0014) traffic signal controlled junction
- B184 Thaxted Road / Peaslands Road existing mini-roundabout junction & consented traffic signal junction (UTT/21/2509/OP)

7. Public Rights of Way

The site is bound by footpath 36 (Saffron Walden 44) on the north-eastern edge of the southern parcel, bridleway 19 (Saffron Walden 44) on the north-eastern edge of the northern parcel and byway 18 (Saffron Walden 44) runs through the site.

It is noted and welcomed that the existing public rights of way (PROWs) that traverse and border the site will be retained. The proposals must ensure the continued safe passage of the public on the definitive right of way, both during construction and for the lifetime of the development.

It is recommended that you conduct a Highways Status search to determine the definitive routes and widths of the PROWs to help inform your work, these should be clearly marked on layout drawings submitted with the application.

We would not accept the urbanisation of these PROW routes. We have concerns that surfacing byway 18 may increase the speed of vehicles travelling along the byway and/or cause drainage issues/flooding (we are aware of an outstanding flooding issue on the byway). As such, the byway should retain a natural surface. The applicant should note that any improvements to the byway would require the consent of the landowner (as well as the highway authority). We are content for the byway to be improved as part of the proposals, but this should keep an appropriate permeable surface.

As above, we would find it unacceptable for vehicles to be crossing byway 18.

8. Accident data

The submitted Transport Statement should include the previous 60 months' accident records for the study area together with an analysis of any trends or clusters. This can be obtained from casualtydata@essexhighways.org. Please note that we do not accept CrashMap.

9. Other

1. A residential travel plan would be required for the site, along with the provision of residential travel information packs to all dwellings – these would be secured by condition in the event permission is granted.

2. A Construction Management Plan would be required and would be secured by condition in the event permission is granted. We recommend giving consideration to construction vehicle routing ahead of making your planning application

3. Climate change: Mitigating and adapting to a changing climate is a national and Essex County Council priority. The Climate Change Act 2008 (amended in 2019) commits the UK to achieving net-zero by 2050. In Essex, the Essex Climate Action

Commission proposed 160+ recommendations for climate action. Essex County Council is working with partners to achieve specific goals by 2030, including net zero carbon development. All those active in the development sector should have regard to these goals and applicants are invited to sign up to the Essex Developers' Group Climate Charter [2022] and to view the advice contained in the Essex Design Guide. Climate Action Advice guides for residents, businesses and schools are also available.

10. Contact details and further information

1. Please visit https://www.essex.gov.uk/planning-land-and-recycling/planning-and-development/planning-advice-and-guidance/guidance where there are a number of documents/sites to help inform your application:
    - Essex Design Guide, including our Highways Technical Manual
    - Essex Planning Protocol
    - Developers' Guide to Infrastructure Contributions

2. Please visit https://www.essex.gov.uk/planning-land-and-recycling/planning-and-development/planning-advice-and-guidance/highways-planning if you require further highways planning advice. Additional pre-application advice will incur additional fees in line with our charging schedule

3. Current accident data can be obtained from: casualtydata@essexhighways.org

4. Highway Boundary Information/ Highway Status Searches can be obtained from: Highway.Status@essexhighways.org

5. You may want to consider engaging Essex Highways to undertake the Stage 1 Road Safety Audit required. They will be carrying out the safety audits later in the process so this would ensure continuity. They can be contacted at roadsafety.audit@essexhighways.org

6. Please do not hesitate to contact me at rachel.mckeown@essex.gov.uk if you wish to discuss anything further or require any clarifications

Please note the following:
The content of this communication is based on information supplied at the time of the enquiry and is not a formal response to a planning application. Please be aware that it may not reflect the contents of any formal reply made by the Highway Authority in response to an official consultation from the LPA on a planning application submitted for a proposal containing more detailed information and following comprehensive internal consultation with appropriate departments of Essex Highways; particularly if in the opinion of the Highway Authority highway safety, efficiency and accessibility standards cannot be achieved.

Appendix 2

KEY

- PLANNING APPLICATION BOUNDARY LINE
- ACCESS POINTS (ALL MODES)
- INDICATIVE GREEN SPACE CROSSING POINTS
- NON VEHICULAR ACCESS POINTS
- RESIDENTIAL USE - USE CLASS C3 (TO INCLUDE ROADS & ASSOCIATED INFRASTRUCTURE AND INCIDENTAL AREAS OF OPEN SPACE)
- GREEN INFRASTRUCTURE - TO INCLUDE PUBLIC OPEN AND AMENITY SPACE (INCLUDING EQUIPPED CHILDREN'S PLAY AREAS); ASSOCIATED LANDSCAPING AND ECOLOGICAL ENHANCEMENT WORKS; FOOTPATHS, CYCLEWAYS; DRAINAGE, UTILITIES AND SERVICE INFRASTRUCTURE; EXISTING TREES/HEDGES; EXISTING DRAINAGE DITCH; GREEN INFRASTRUCTURE MAY ALSO INCLUDE CROSSING POINTS OF ROADS;
- INDICATIVE PRIMARY ACCESS ROAD
- INDICATIVE SECONDARY/TERTIARY ROADS
- EXISTING PUBLIC RIGHT OF WAY
- INFORMAL PEDESTRIAN PATH
- LANDSCAPE BUFFER MINIMUM WIDTH OF 10m MEASURED FROM SITE BOUNDARY
- BRIDLEWAY/HEDGEROW BUFFER MINIMUM WIDTH OF 5m MEASURED FROM EXISTING HEDGE CANOPY
- RECYCLING CENTRE BUFFER MINIMUM WIDTH OF 20m MEASURED FROM SITE BOUNDARY

NOTE:
DEVELOPMENT CELLS/ROAD ALIGNMENT CAN DEVIATE BY UP TO 10m UPON DETAILED DESIGN

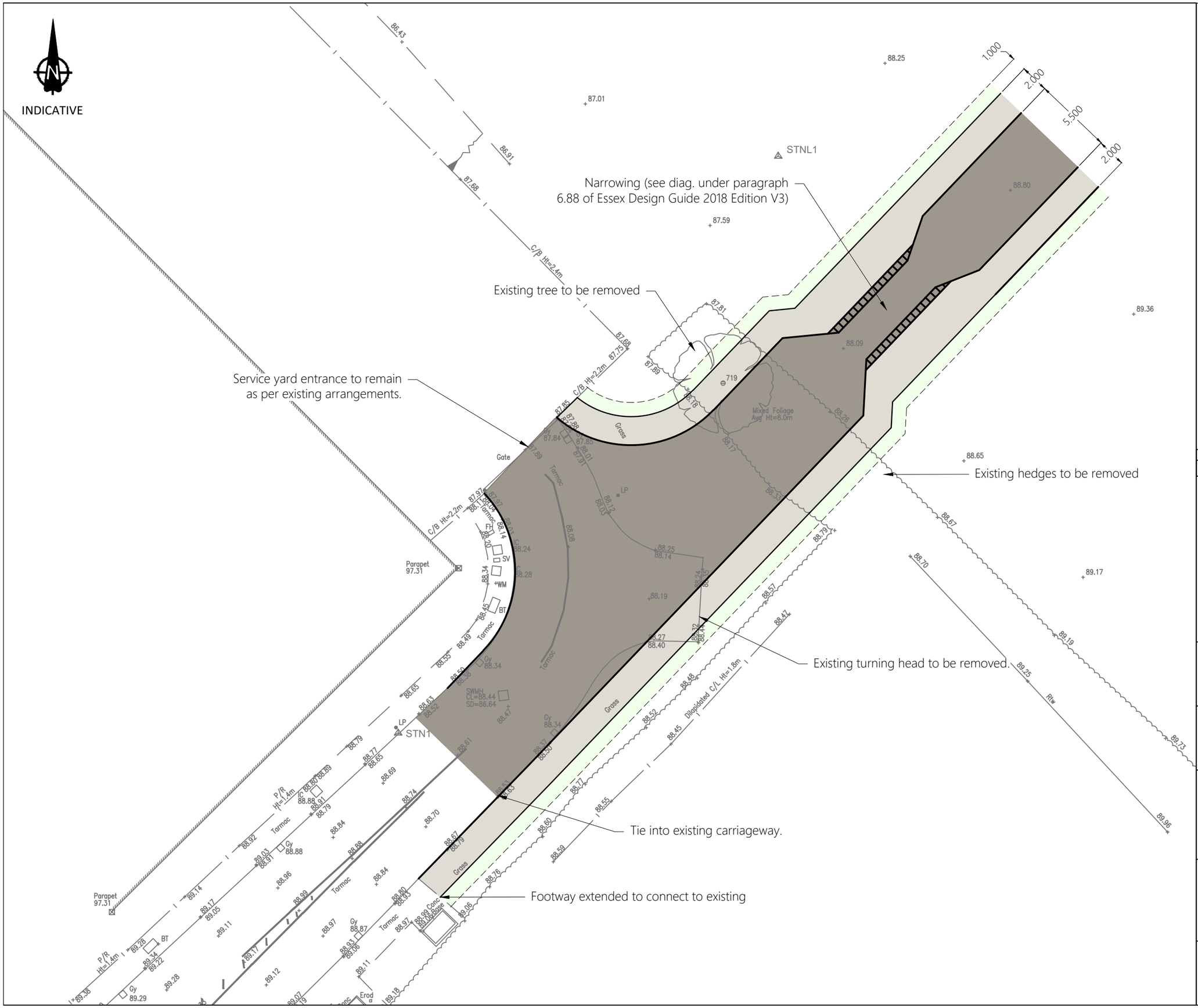
PRIMARY ACCESS CORRIDOR TO INCLUDE ROAD, FOOTPATHS, CYCLE PATHS WHERE NECESSARY, SERVICE MARGINS, VERGES, SUDS WHERE INCLUDED & PRIVATE FRONT GARDENS.

KIER

Client: Kier Group	Drawing Title: Framework Plan					Omega Architects	Project No: 3119	Class: A	Dwg No: 1004	Status: PR	Rev: D
Project: Land north East of Thaxted Road, Saffron Walden	Scale: 1:500 @ A1	Revision	Drawn	Check	Date	The Front Barn, 124 Manor Road North, Thames Ditton, KT7 0BH T: 01372 470 313 W: www.omega-architects.co.uk					
		B	MP	JH	17.11.23						
		C	MP	JH	28.11.23						
		D	MP	JH	29.11.23						

CLASS: C - COLOURED, A - BLACK & WHITE
STATUS: SK - SKETCH, PR - PRELIMINARY, PL - PLANNING, WD - WORKING DRAWING

Appendix 3



Notes

1. Do not scale from this drawing. All dimensions shown are in metres unless noted otherwise.
2. This drawing has been based upon topographical survey information produced by CD Surveys Ltd and Milestone Transport Planning cannot be held responsible for any discrepancies which may arise because of it.

Drawing Revisions

Rev:	Drn:	Date:	Details	Chk:
-	JB	13/11/2023	First issue	MS

Client

Kier Ventures Ltd

Project

Land North of Thaxted Road, Saffron Walden

Title

Proposed Site Access Arrangements via Knight Park

MILESTONE TRANSPORT PLANNING
7 Ancells Court, Rye Close, Fleet, Hampshire, GU51 2UY
Tel: 01483 397888
Gateshead IBC, Mulgrave Terrace, Gateshead, NE8 1AN

Drawing Number: 23075/001

Scale: 1:250 @ A3

Revision: -

Appendix 4

Calculation Reference: AUDIT-740101-230801-0811

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	ES	EAST SUSSEX	1 days
	HC	HAMPSHIRE	3 days
	KC	KENT	1 days
	WS	WEST SUSSEX	2 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
	NF	NORFOLK	6 days
	SF	SUFFOLK	1 days

Primary Filtering selection:

Parameter: No of Dwellings
Actual Range: 38 to 117 (units:)
Range Selected by User: 30 to 120 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/15 to 01/03/23

Selected survey days:

Tuesday	5 days
Wednesday	2 days
Thursday	6 days
Friday	2 days

Selected survey types:

Manual count	15 days
Directional ATC Count	0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre)	2
Edge of Town	9
Neighbourhood Centre (PPS6 Local Centre)	4

Selected Location Sub Categories:

Residential Zone	9
Village	4
Out of Town	1
No Sub Category	1

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	11 days - Selected
Servicing vehicles Excluded	26 days - Selected

Secondary Filtering selection:

Use Class:
C3 15 days

Population within 500m Range:
All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,000 or Less	1 days
1,001 to 5,000	3 days
5,001 to 10,000	6 days
10,001 to 15,000	2 days
15,001 to 20,000	2 days
20,001 to 25,000	1 days

Population within 5 miles:

5,001 to 25,000	3 days
25,001 to 50,000	5 days
50,001 to 75,000	4 days
75,001 to 100,000	3 days

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	12 days
1.6 to 2.0	2 days

Travel Plan:

Yes	12 days
No	3 days

PTAL Rating:

No PTAL Present	15 days

LIST OF SITES relevant to selection parameters

1 CA-03-A-08 DETACHED & SEMI-DETACHED CAMBRIDGESHIRE
GIDDING ROAD
SAWTRY

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 83
Survey date: THURSDAY *13/10/22* *Survey Type: MANUAL*

2 ES-03-A-07 MIXED HOUSES & FLATS EAST SUSSEX
NEW ROAD
HAILSHAM
HELLINGLY
Edge of Town
Residential Zone
Total No of Dwellings: 91
Survey date: THURSDAY *07/11/19* *Survey Type: MANUAL*

3 HC-03-A-23 HOUSES & FLATS HAMPSHIRE
CANADA WAY
LIPHOOK

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 62
Survey date: TUESDAY *19/11/19* *Survey Type: MANUAL*

4 HC-03-A-27 MIXED HOUSES HAMPSHIRE
DAIRY ROAD
ANDOVER

Edge of Town
Residential Zone
Total No of Dwellings: 73
Survey date: TUESDAY *16/11/21* *Survey Type: MANUAL*

5 HC-03-A-31 MIXED HOUSES & FLATS HAMPSHIRE
KILN ROAD
LIPHOOK

Edge of Town
Residential Zone
Total No of Dwellings: 44
Survey date: FRIDAY *07/10/22* *Survey Type: MANUAL*

6 KC-03-A-03 MIXED HOUSES & FLATS KENT
HYTHE ROAD
ASHFORD
WILLESBOROUGH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 51
Survey date: THURSDAY *14/07/16* *Survey Type: MANUAL*

7 NF-03-A-05 MIXED HOUSES NORFOLK
HEATH DRIVE
HOLT

Edge of Town
Residential Zone
Total No of Dwellings: 40
Survey date: THURSDAY *19/09/19* *Survey Type: MANUAL*

8 NF-03-A-25 MIXED HOUSES & FLATS NORFOLK
WOODFARM LANE
GORLESTON-ON-SEA

Edge of Town
Residential Zone
Total No of Dwellings: 55
Survey date: TUESDAY *21/09/21* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

9 NF-03-A-27 MIXED HOUSES & FLATS NORFOLK
YARMOUTH ROAD
NEAR NORWICH
BLOFIELD
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 93
Survey date: THURSDAY *16/09/21* *Survey Type: MANUAL*

10 NF-03-A-34 MIXED HOUSES NORFOLK
NORWICH ROAD
SWAFFHAM

Edge of Town
Out of Town
Total No of Dwellings: 80
Survey date: TUESDAY *27/09/22* *Survey Type: MANUAL*

11 NF-03-A-36 MIXED HOUSES NORFOLK
LONDON ROAD
WYMONDHAM

Edge of Town
No Sub Category
Total No of Dwellings: 75
Survey date: THURSDAY *29/09/22* *Survey Type: MANUAL*

12 NF-03-A-37 MIXED HOUSES NORFOLK
GREENFIELDS ROAD
DEREHAM

Edge of Town
Residential Zone
Total No of Dwellings: 44
Survey date: TUESDAY *27/09/22* *Survey Type: MANUAL*

13 SF-03-A-06 DETACHED & SEMI-DETACHED SUFFOLK
BURY ROAD
KENTFORD

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 38
Survey date: FRIDAY *22/09/17* *Survey Type: MANUAL*

14 WS-03-A-14 MIXED HOUSES WEST SUSSEX
TODDINGTON LANE
LITTLEHAMPTON
WICK
Edge of Town
Residential Zone
Total No of Dwellings: 117
Survey date: WEDNESDAY *20/10/21* *Survey Type: MANUAL*

15 WS-03-A-16 DETACHED & SEMI-DETACHED WEST SUSSEX
BRACKLESHAM LANE
BRACKLESHAM BAY

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 58
Survey date: WEDNESDAY *09/11/22* *Survey Type: MANUAL*

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
CA-03-A-07	COVID Survey
IW-03-A-01	IoW Survey
WS-03-A-07	Bungalows

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 1.63

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	15	67	0.094	15	67	0.336	15	67	0.430
08:00 - 09:00	15	67	0.157	15	67	0.347	15	67	0.504
09:00 - 10:00	15	67	0.148	15	67	0.172	15	67	0.320
10:00 - 11:00	15	67	0.136	15	67	0.177	15	67	0.313
11:00 - 12:00	15	67	0.119	15	67	0.154	15	67	0.273
12:00 - 13:00	15	67	0.172	15	67	0.149	15	67	0.321
13:00 - 14:00	15	67	0.170	15	67	0.175	15	67	0.345
14:00 - 15:00	15	67	0.163	15	67	0.197	15	67	0.360
15:00 - 16:00	15	67	0.275	15	67	0.164	15	67	0.439
16:00 - 17:00	15	67	0.284	15	67	0.189	15	67	0.473
17:00 - 18:00	15	67	0.378	15	67	0.163	15	67	0.541
18:00 - 19:00	15	67	0.277	15	67	0.166	15	67	0.443
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.373			2.389			4.762

Parameter summary

Trip rate parameter range selected:	38 - 117 (units:)
Survey date date range:	01/01/15 - 01/03/23
Number of weekdays (Monday-Friday):	15
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	6
Surveys manually removed from selection:	3

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL CYCLISTS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	15	67	0.003	15	67	0.017	15	67	0.020
08:00 - 09:00	15	67	0.001	15	67	0.012	15	67	0.013
09:00 - 10:00	15	67	0.004	15	67	0.006	15	67	0.010
10:00 - 11:00	15	67	0.009	15	67	0.005	15	67	0.014
11:00 - 12:00	15	67	0.001	15	67	0.004	15	67	0.005
12:00 - 13:00	15	67	0.003	15	67	0.001	15	67	0.004
13:00 - 14:00	15	67	0.003	15	67	0.004	15	67	0.007
14:00 - 15:00	15	67	0.006	15	67	0.001	15	67	0.007
15:00 - 16:00	15	67	0.014	15	67	0.008	15	67	0.022
16:00 - 17:00	15	67	0.011	15	67	0.003	15	67	0.014
17:00 - 18:00	15	67	0.007	15	67	0.006	15	67	0.013
18:00 - 19:00	15	67	0.004	15	67	0.003	15	67	0.007
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.066			0.070			0.136

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL VEHICLE OCCUPANTS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	15	67	0.104	15	67	0.425	15	67	0.529
08:00 - 09:00	15	67	0.186	15	67	0.527	15	67	0.713
09:00 - 10:00	15	67	0.163	15	67	0.200	15	67	0.363
10:00 - 11:00	15	67	0.158	15	67	0.222	15	67	0.380
11:00 - 12:00	15	67	0.133	15	67	0.181	15	67	0.314
12:00 - 13:00	15	67	0.198	15	67	0.195	15	67	0.393
13:00 - 14:00	15	67	0.224	15	67	0.224	15	67	0.448
14:00 - 15:00	15	67	0.193	15	67	0.248	15	67	0.441
15:00 - 16:00	15	67	0.446	15	67	0.208	15	67	0.654
16:00 - 17:00	15	67	0.411	15	67	0.261	15	67	0.672
17:00 - 18:00	15	67	0.519	15	67	0.232	15	67	0.751
18:00 - 19:00	15	67	0.357	15	67	0.218	15	67	0.575
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.092			3.141			6.233

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL PEDESTRIANS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	15	67	0.020	15	67	0.050	15	67	0.070
08:00 - 09:00	15	67	0.041	15	67	0.125	15	67	0.166
09:00 - 10:00	15	67	0.051	15	67	0.041	15	67	0.092
10:00 - 11:00	15	67	0.018	15	67	0.051	15	67	0.069
11:00 - 12:00	15	67	0.044	15	67	0.035	15	67	0.079
12:00 - 13:00	15	67	0.026	15	67	0.030	15	67	0.056
13:00 - 14:00	15	67	0.034	15	67	0.025	15	67	0.059
14:00 - 15:00	15	67	0.045	15	67	0.030	15	67	0.075
15:00 - 16:00	15	67	0.114	15	67	0.065	15	67	0.179
16:00 - 17:00	15	67	0.056	15	67	0.040	15	67	0.096
17:00 - 18:00	15	67	0.053	15	67	0.051	15	67	0.104
18:00 - 19:00	15	67	0.066	15	67	0.045	15	67	0.111
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.568			0.588			1.156

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL BUS/TRAM PASSENGERS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	15	67	0.000	15	67	0.017	15	67	0.017
08:00 - 09:00	15	67	0.001	15	67	0.028	15	67	0.029
09:00 - 10:00	15	67	0.004	15	67	0.010	15	67	0.014
10:00 - 11:00	15	67	0.006	15	67	0.007	15	67	0.013
11:00 - 12:00	15	67	0.004	15	67	0.002	15	67	0.006
12:00 - 13:00	15	67	0.006	15	67	0.006	15	67	0.012
13:00 - 14:00	15	67	0.001	15	67	0.001	15	67	0.002
14:00 - 15:00	15	67	0.004	15	67	0.005	15	67	0.009
15:00 - 16:00	15	67	0.019	15	67	0.008	15	67	0.027
16:00 - 17:00	15	67	0.012	15	67	0.002	15	67	0.014
17:00 - 18:00	15	67	0.010	15	67	0.001	15	67	0.011
18:00 - 19:00	15	67	0.005	15	67	0.001	15	67	0.006
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.072			0.088			0.160

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL PUBLIC TRANSPORT USERS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	15	67	0.000	15	67	0.031	15	67	0.031
08:00 - 09:00	15	67	0.001	15	67	0.049	15	67	0.050
09:00 - 10:00	15	67	0.004	15	67	0.013	15	67	0.017
10:00 - 11:00	15	67	0.006	15	67	0.008	15	67	0.014
11:00 - 12:00	15	67	0.005	15	67	0.002	15	67	0.007
12:00 - 13:00	15	67	0.007	15	67	0.007	15	67	0.014
13:00 - 14:00	15	67	0.001	15	67	0.001	15	67	0.002
14:00 - 15:00	15	67	0.005	15	67	0.005	15	67	0.010
15:00 - 16:00	15	67	0.020	15	67	0.008	15	67	0.028
16:00 - 17:00	15	67	0.020	15	67	0.003	15	67	0.023
17:00 - 18:00	15	67	0.026	15	67	0.001	15	67	0.027
18:00 - 19:00	15	67	0.022	15	67	0.001	15	67	0.023
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.117			0.129			0.246

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 1.63

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	15	67	0.126	15	67	0.523	15	67	0.649
08:00 - 09:00	15	67	0.229	15	67	0.713	15	67	0.942
09:00 - 10:00	15	67	0.222	15	67	0.260	15	67	0.482
10:00 - 11:00	15	67	0.191	15	67	0.286	15	67	0.477
11:00 - 12:00	15	67	0.183	15	67	0.222	15	67	0.405
12:00 - 13:00	15	67	0.234	15	67	0.233	15	67	0.467
13:00 - 14:00	15	67	0.262	15	67	0.254	15	67	0.516
14:00 - 15:00	15	67	0.249	15	67	0.284	15	67	0.533
15:00 - 16:00	15	67	0.594	15	67	0.289	15	67	0.883
16:00 - 17:00	15	67	0.498	15	67	0.307	15	67	0.805
17:00 - 18:00	15	67	0.605	15	67	0.290	15	67	0.895
18:00 - 19:00	15	67	0.448	15	67	0.267	15	67	0.715
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.841			3.928			7.769

Appendix 5

Land North East of Thaxted Road, Saffron Walden

Calculation of Development Trips by Mode of Travel (Census O-D Split)

56 units

Total People 100.0%

Time Period	Arrivals		Departures		Total Two-Way	
	Trip Rate	No.	Trip Rate	No.	Trip Rate	No.
0700-0800	0.126	7	0.523	29	0.649	36
0800-0900	0.229	13	0.713	40	0.942	53
0900-1000	0.222	12	0.260	15	0.482	27
1000-1100	0.191	11	0.286	16	0.477	27
1100-1200	0.183	10	0.222	12	0.405	23
1200-1300	0.234	13	0.233	13	0.467	26
1300-1400	0.262	15	0.254	14	0.516	29
1400-1500	0.249	14	0.284	16	0.533	30
1500-1600	0.594	33	0.289	16	0.883	49
1600-1700	0.498	28	0.307	17	0.805	45
1700-1800	0.605	34	0.290	16	0.895	50
1800-1900	0.448	25	0.267	15	0.715	40
TOTALS	3.841	215	3.928	220	7.769	435

Car Driver 62.8%

Time Period	Arrivals		Departures		Total Two-Way	
	Trip Rate	No.	Trip Rate	No.	Trip Rate	No.
0700-0800	0.079	4	0.328	18	0.408	23
0800-0900	0.144	8	0.448	25	0.592	33
0900-1000	0.139	8	0.163	9	0.303	17
1000-1100	0.120	7	0.180	10	0.300	17
1100-1200	0.115	6	0.139	8	0.254	14
1200-1300	0.147	8	0.146	8	0.293	16
1300-1400	0.165	9	0.160	9	0.324	18
1400-1500	0.156	9	0.178	10	0.335	19
1500-1600	0.373	21	0.181	10	0.555	31
1600-1700	0.313	18	0.193	11	0.506	28
1700-1800	0.380	21	0.182	10	0.562	31
1800-1900	0.281	16	0.168	9	0.449	25
TOTALS	2.412	135	2.467	138	4.879	273

Car Passenger 4.4%

Time Period	Arrivals		Departures		Total Two-Way	
	Trip Rate	No.	Trip Rate	No.	Trip Rate	No.
0700-0800	0.006	0	0.023	1	0.029	2
0800-0900	0.010	1	0.031	2	0.041	2
0900-1000	0.010	1	0.011	1	0.021	1
1000-1100	0.008	0	0.013	1	0.021	1
1100-1200	0.008	0	0.010	1	0.018	1
1200-1300	0.010	1	0.010	1	0.021	1
1300-1400	0.012	1	0.011	1	0.023	1
1400-1500	0.011	1	0.012	1	0.023	1
1500-1600	0.026	1	0.013	1	0.039	2
1600-1700	0.022	1	0.014	1	0.035	2
1700-1800	0.027	1	0.013	1	0.039	2
1800-1900	0.020	1	0.012	1	0.031	2
TOTALS	0.169	9	0.173	10	0.342	19

Cycle 1.4%

Time Period	Arrivals		Departures		Total Two-Way	
	Trip Rate	No.	Trip Rate	No.	Trip Rate	No.
0700-0800	0.002	0	0.007	0	0.009	1
0800-0900	0.003	0	0.010	1	0.013	1
0900-1000	0.003	0	0.004	0	0.007	0
1000-1100	0.003	0	0.004	0	0.007	0
1100-1200	0.003	0	0.003	0	0.006	0
1200-1300	0.003	0	0.003	0	0.007	0
1300-1400	0.004	0	0.004	0	0.007	0
1400-1500	0.003	0	0.004	0	0.007	0
1500-1600	0.008	0	0.004	0	0.012	1
1600-1700	0.007	0	0.004	0	0.011	1
1700-1800	0.008	0	0.004	0	0.013	1
1800-1900	0.006	0	0.004	0	0.010	1
TOTALS	0.054	3	0.055	3	0.109	6

Walk 21.1%

Time Period	Arrivals		Departures		Total Two-Way	
	Trip Rate	No.	Trip Rate	No.	Trip Rate	No.
0700-0800	0.027	1	0.110	6	0.137	8
0800-0900	0.048	3	0.150	8	0.199	11
0900-1000	0.047	3	0.055	3	0.102	6
1000-1100	0.040	2	0.060	3	0.101	6
1100-1200	0.039	2	0.047	3	0.085	5
1200-1300	0.049	3	0.049	3	0.099	6
1300-1400	0.055	3	0.054	3	0.109	6
1400-1500	0.053	3	0.060	3	0.112	6
1500-1600	0.125	7	0.061	3	0.186	10
1600-1700	0.105	6	0.065	4	0.170	10
1700-1800	0.128	7	0.061	3	0.189	11
1800-1900	0.095	5	0.056	3	0.151	8
TOTALS	0.810	45	0.829	46	1.639	92

Bus 1.9%

Time Period	Arrivals		Departures		Total Two-Way	
	Trip Rate	No.	Trip Rate	No.	Trip Rate	No.
0700-0800	0.002	0	0.010	1	0.012	1
0800-0900	0.004	0	0.014	1	0.018	1
0900-1000	0.004	0	0.005	0	0.009	1
1000-1100	0.004	0	0.005	0	0.009	1
1100-1200	0.003	0	0.004	0	0.008	0
1200-1300	0.004	0	0.004	0	0.009	0
1300-1400	0.005	0	0.005	0	0.010	1
1400-1500	0.005	0	0.005	0	0.010	1
1500-1600	0.011	1	0.005	0	0.017	1
1600-1700	0.009	1	0.006	0	0.015	1
1700-1800	0.011	1	0.006	0	0.017	1
1800-1900	0.009	0	0.005	0	0.014	1
TOTALS	0.073	4	0.075	4	0.148	8

Rail 7.0%

Time Period	Arrivals		Departures		Total Two-Way	
	Trip Rate	No.	Trip Rate	No.	Trip Rate	No.
0700-0800	0.009	0	0.037	2	0.045	3
0800-0900	0.016	1	0.050	3	0.066	4
0900-1000	0.016	1	0.018	1	0.034	2
1000-1100	0.013	1	0.020	1	0.033	2
1100-1200	0.013	1	0.016	1	0.028	2
1200-1300	0.016	1	0.016	1	0.033	2
1300-1400	0.018	1	0.018	1	0.036	2
1400-1500	0.017	1	0.020	1	0.037	2
1500-1600	0.042	2	0.020	1	0.062	3
1600-1700	0.035	2	0.021	1	0.056	3
1700-1800	0.042	2	0.020	1	0.063	4
1800-1900	0.031	2	0.019	1	0.050	3
TOTALS	0.269	15	0.275	15	0.544	30

Other 1.4%

Time Period	Arrivals		Departures		Total Two-Way	
	Trip Rate	No.	Trip Rate	No.	Trip Rate	No.
0700-0800	0.002	0	0.007	0	0.009	1
0800-0900	0.003	0	0.010	1	0.013	1
0900-1000	0.003	0	0.004	0	0.007	0
1000-1100	0.003	0	0.004	0	0.007	0
1100-1200	0.003	0	0.003	0	0.006	0
1200-1300	0.003	0	0.003	0	0.007	0
1300-1400	0.004	0	0.004	0	0.007	0
1400-1500	0.003	0	0.004	0	0.007	0
1500-1600	0.008	0	0.004	0	0.012	1
1600-1700	0.007	0	0.004	0	0.011	1
1700-1800	0.008	0	0.004	0	0.013	1
1800-1900	0.006	0	0.004	0	0.010	1
TOTALS	0.054	3	0.055	3	0.109	6

Appendix 6

WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)

population	All usual residents aged 16 and over in employment the week before the census
units	Persons
date	2011
usual residence	E02004592 : Uttlesford 002 (2011 super output area - middle layer)

place of work	Driving a car or van		
E02004591 : Uttlesford 001	153	4.8%	*Assumes 50% of total (Chesterford Research Park & Gt / Little Chesterford)*
	92	2.9%	*Assumes 30% (Little Walden, Hadstock & Ashdon hinterland)*
	62	2.0%	*Assumes 20% (Audley End Est, Littlebury & Gt Chesterford)*
E02004592 : Uttlesford 002	387	12.2%	*Assumes 60% (Shire Hill Ind. Est & Town Centre split equally - no external trips to study area)*
	96	3.0%	*Assumes 15% (Saffron Walden Hosp / Tescos - no external trips to study area)*
	96	3.0%	*Assumes 15% (Council Offices / Town Centre (west) - no external trips to study area)*
	64	2.0%	*Assumes 10% (Knight Park & Thaxted Rd hinterland - no external trips to study area)*
E02004593 : Uttlesford 003	83	2.6%	*Assumes 50% (Wendens Ambo, Newport, Widdington)*
	67	2.1%	*Assumes 40% (rural hinterland west of M11)*
	17	0.5%	*Assumes 10% (Littlebury)*
E02004594 : Uttlesford 004	88	2.8%	*(Assumes 60% (Thaxted & Debden)*
	59	1.9%	*Assumes 40% (Radwinter, Gt Sampford & rural hinterland)*
E02004595 : Uttlesford 005	61	1.9%	
E02004596 : Uttlesford 006	113	3.6%	*Assumes 70% (Stansted Apt. (east), Eastons & Lt. Canfield)*
	48	1.5%	*Assumes 30% (Stansted Apt. (west))*
E02004597 : Uttlesford 007	35	1.1%	
E02004598 : Uttlesford 008	17	0.5%	
E02004599 : Uttlesford 009	18	0.6%	
Babergh	6	0.2%	
Basildon	15	0.5%	
Bedford	1	0.0%	
Braintree	50	1.6%	
Breckland	0	0.0%	
Brentwood	6	0.2%	
Broadland	0	0.0%	
Broxbourne	17	0.5%	
Cambridge	355	11.2%	
Castle Point	1	0.0%	
Central Bedfordshire	1	0.0%	
Chelmsford	28	0.9%	
Colchester	17	0.5%	
Dacorum	3	0.1%	
East Cambridgeshire	19	0.6%	
East Hertfordshire	171	5.4%	
Epping Forest	40	1.3%	
Fenland	0	0.0%	
Forest Heath	26	0.8%	
Great Yarmouth	0	0.0%	
Harlow	85	2.7%	
Hertsmere	7	0.2%	
Huntingdonshire	27	0.9%	
Ipswich	2	0.1%	
King's Lynn and West Norfolk	0	0.0%	
Luton	9	0.3%	
Maldon	4	0.1%	
Mid Suffolk	4	0.1%	
North Hertfordshire	40	1.3%	
North Norfolk	0	0.0%	
Norwich	4	0.1%	
Peterborough	6	0.2%	
Rochford	5	0.2%	
South Cambridgeshire	416	13.1%	
South Norfolk	0	0.0%	
Southend-on-Sea	7	0.2%	
St Albans	2	0.1%	
St Edmundsbury	54	1.7%	
Stevenage	4	0.1%	
Suffolk Coastal	0	0.0%	
Tendring	7	0.2%	
Three Rivers	1	0.0%	
Thurrock	2	0.1%	
Watford	3	0.1%	
Waveney	0	0.0%	
Welwyn Hatfield	17	0.5%	
East Midlands	11	0.3%	
London	117	3.7%	
North East	0	0.0%	
North West	2	0.1%	
Northern Ireland	0	0.0%	
Scotland	0	0.0%	
South East	17	0.5%	
South West	5	0.2%	
Wales	0	0.0%	
West Midlands	2	0.1%	
Yorkshire and The Humber	3	0.1%	
	3,175	100.0%	

B184 (s)	13.7%
B1053 (e)	6.7%
B1052 (n)	2.9%
B184 (n)	32.3%
B1052 / B1383 (s)	21.3%
Wenden Rd / B1039	2.6%
Audley End Rd / B1383 (n)	20.4%
	100.0%

Appendix 7

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 1 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (NW) / UN-NAMED ROAD / THAXTED ROAD (SE) **DAY:** TUESDAY

TIME	A TO B FROM THAXTED ROAD (NW) TO UN-NAMED ROAD								A TO C FROM THAXTED ROAD (NW) TO THAXTED ROAD (SE)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
07:00	2	1	0	0	0	0	0	3	15	2	0	0	0	0	0	17
07:15	2	2	2	0	0	0	0	6	13	3	0	0	0	1	0	17
07:30	5	3	0	0	0	0	0	8	17	7	0	0	0	0	0	24
07:45	8	4	0	0	0	0	0	12	22	6	1	0	0	0	0	29
H/TOT	17	10	2	0	0	0	0	29	67	18	1	0	0	1	0	87
08:00	10	1	0	0	0	0	0	11	26	3	0	0	0	0	0	29
08:15	13	4	1	0	0	0	0	18	28	4	0	0	2	0	0	34
08:30	36	2	0	0	0	0	0	38	15	4	2	0	0	0	0	21
08:45	38	0	0	0	0	0	0	38	25	7	0	0	0	0	0	32
H/TOT	97	7	1	0	0	0	0	105	94	18	2	0	2	0	0	116
09:00	41	1	0	0	0	0	0	42	18	8	1	1	0	0	0	28
09:15	30	4	1	0	0	0	0	35	14	4	2	0	1	0	0	21
09:30	32	6	0	0	0	0	0	38	12	2	1	0	0	0	0	15
09:45	36	1	0	2	0	0	0	39	34	4	2	1	0	0	0	41
H/TOT	139	12	1	2	0	0	0	154	78	18	6	2	1	0	0	105
P/TOT	253	29	4	2	0	0	0	288	239	54	9	2	3	1	0	308

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 1 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (NW) / UN-NAMED ROAD / THAXTED ROAD (SE) **DAY:** TUESDAY

TIME	A TO B FROM THAXTED ROAD (NW) TO UN-NAMED ROAD								A TO C FROM THAXTED ROAD (NW) TO THAXTED ROAD (SE)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
16:00	45	4	0	0	0	1	0	50	29	8	2	1	0	1	0	41
16:15	45	4	1	0	0	0	0	50	24	3	2	0	1	0	0	30
16:30	49	8	2	0	0	1	0	60	50	7	1	0	0	0	0	58
16:45	39	2	0	0	0	0	0	41	35	14	1	0	0	1	0	51
H/TOT	178	18	3	0	0	2	0	201	138	32	6	1	1	2	0	180
17:00	36	0	0	0	0	0	0	36	43	4	0	0	0	0	0	47
17:15	28	2	0	0	0	0	0	30	40	3	0	0	2	1	0	46
17:30	36	1	0	0	0	0	0	37	48	4	0	0	0	0	0	52
17:45	35	6	0	0	0	0	0	41	39	2	0	0	0	0	0	41
H/TOT	135	9	0	0	0	0	0	144	170	13	0	0	2	1	0	186
18:00	31	4	0	0	0	0	0	35	43	1	1	0	1	0	0	46
18:15	24	3	0	0	0	0	0	27	21	0	0	0	0	0	0	21
18:30	30	1	0	0	0	0	0	31	20	0	0	0	0	0	0	20
18:45	28	0	0	0	0	0	0	28	21	4	1	0	0	0	1	27
H/TOT	113	8	0	0	0	0	0	121	105	5	2	0	1	0	1	114
P/TOT	426	35	3	0	0	2	0	466	413	50	8	1	4	3	1	480

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 1 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (NW) / UN-NAMED ROAD / THAXTED ROAD (SE) **DAY:** TUESDAY

TIME	B TO A FROM UN-NAMED ROAD TO THAXTED ROAD (NW)								B TO C FROM UN-NAMED ROAD TO THAXTED ROAD (SE)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
07:00	6	1	0	0	0	0	0	7	5	1	0	0	0	0	0	6
07:15	7	2	1	0	0	0	0	10	1	0	0	0	0	0	0	1
07:30	7	2	1	0	0	0	0	10	3	0	0	0	0	0	0	3
07:45	6	2	1	0	0	0	0	9	2	0	0	0	0	0	0	2
H/TOT	26	7	3	0	0	0	0	36	11	1	0	0	0	0	0	12
08:00	9	5	0	0	0	0	0	14	0	1	0	0	0	0	0	1
08:15	4	2	0	0	0	0	0	6	4	0	0	0	0	0	0	4
08:30	19	2	2	0	0	0	0	23	8	1	0	0	0	0	0	9
08:45	13	2	0	0	0	0	0	15	7	0	0	0	0	0	0	7
H/TOT	45	11	2	0	0	0	0	58	19	2	0	0	0	0	0	21
09:00	24	3	0	0	0	0	0	27	9	2	0	0	0	0	0	11
09:15	25	3	0	0	0	0	0	28	10	1	0	0	0	0	0	11
09:30	36	3	0	1	0	0	0	40	7	1	0	0	0	0	0	8
09:45	34	4	0	0	0	0	0	38	9	0	0	0	0	0	0	9
H/TOT	119	13	0	1	0	0	0	133	35	4	0	0	0	0	0	39
P/TOT	190	31	5	1	0	0	0	227	65	7	0	0	0	0	0	72

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 1 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (NW) / UN-NAMED ROAD / THAXTED ROAD (SE) **DAY:** TUESDAY

TIME	B TO A FROM UN-NAMED ROAD TO THAXTED ROAD (NW)								B TO C FROM UN-NAMED ROAD TO THAXTED ROAD (SE)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
16:00	37	3	0	0	0	0	0	40	14	3	0	0	0	0	0	17
16:15	38	2	0	0	0	1	0	41	16	3	0	0	0	0	0	19
16:30	34	4	1	0	0	0	0	39	18	2	0	0	0	0	0	20
16:45	27	4	1	0	0	1	0	33	18	1	0	0	0	0	0	19
H/TOT	136	13	2	0	0	2	0	153	66	9	0	0	0	0	0	75
17:00	38	2	0	0	0	0	0	40	16	0	0	0	0	0	0	16
17:15	32	4	0	0	0	0	0	36	15	2	0	0	0	0	0	17
17:30	35	1	0	0	0	0	0	36	17	0	1	0	0	0	0	18
17:45	22	2	0	0	0	0	0	24	12	0	0	0	0	0	0	12
H/TOT	127	9	0	0	0	0	0	136	60	2	1	0	0	0	0	63
18:00	25	0	0	0	0	0	0	25	7	2	0	0	0	0	0	9
18:15	25	3	0	0	0	0	0	28	8	0	0	0	0	0	0	8
18:30	26	2	0	0	0	0	0	28	7	2	0	0	0	0	0	9
18:45	27	0	0	0	0	0	0	27	6	0	0	0	0	0	0	6
H/TOT	103	5	0	0	0	0	0	108	28	4	0	0	0	0	0	32
P/TOT	366	27	2	0	0	2	0	397	154	15	1	0	0	0	0	170

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 1 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (NW) / UN-NAMED ROAD / THAXTED ROAD (SE) **DAY:** TUESDAY

TIME	C TO A FROM THAXTED ROAD (SE) TO THAXTED ROAD (NW)								C TO B FROM THAXTED ROAD (SE) TO UN-NAMED ROAD							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
07:00	16	8	0	0	0	0	0	24	3	1	1	0	0	0	0	5
07:15	15	10	1	0	0	0	0	26	3	4	0	0	0	0	0	7
07:30	38	14	0	0	2	0	1	55	2	1	1	0	0	0	0	4
07:45	44	8	1	0	0	0	0	53	5	0	0	0	0	0	0	5
H/TOT	113	40	2	0	2	0	1	158	13	6	2	0	0	0	0	21
08:00	26	1	0	0	0	0	0	27	4	3	0	0	0	0	0	7
08:15	40	6	0	0	1	0	0	47	3	0	0	0	0	0	0	3
08:30	43	10	1	0	1	0	0	55	8	1	0	0	0	0	0	9
08:45	40	6	3	0	0	0	0	49	12	0	0	1	0	0	0	13
H/TOT	149	23	4	0	2	0	0	178	27	4	0	1	0	0	0	32
09:00	27	7	2	0	0	0	0	36	10	2	0	0	0	0	0	12
09:15	26	2	2	0	1	0	0	31	9	1	0	0	0	0	0	10
09:30	29	3	0	0	1	0	0	33	6	1	0	0	0	0	0	7
09:45	18	4	1	2	0	0	0	25	18	1	1	0	0	0	0	20
H/TOT	100	16	5	2	2	0	0	125	43	5	1	0	0	0	0	49
P/TOT	362	79	11	2	6	0	1	461	83	15	3	1	0	0	0	102

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 1 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (NW) / UN-NAMED ROAD / THAXTED ROAD (SE) **DAY:** TUESDAY

TIME	C TO A FROM THAXTED ROAD (SE) TO THAXTED ROAD (NW)								C TO B FROM THAXTED ROAD (SE) TO UN-NAMED ROAD							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
16:00	28	4	2	0	0	1	0	35	8	1	0	0	0	0	0	9
16:15	24	3	1	0	1	0	0	29	14	0	0	0	0	0	0	14
16:30	25	4	0	0	0	1	0	30	8	0	0	0	0	0	0	8
16:45	20	2	1	0	1	1	0	25	8	3	0	0	0	0	0	11
H/TOT	97	13	4	0	2	3	0	119	38	4	0	0	0	0	0	42
17:00	22	2	0	0	0	0	0	24	7	1	0	0	0	0	0	8
17:15	18	3	0	0	0	0	0	21	11	0	0	0	0	0	0	11
17:30	19	1	0	0	1	0	0	21	4	0	0	0	0	0	0	4
17:45	32	0	0	0	0	0	0	32	5	0	0	0	0	0	0	5
H/TOT	91	6	0	0	1	0	0	98	27	1	0	0	0	0	0	28
18:00	23	6	0	0	0	1	0	30	6	1	0	0	0	0	0	7
18:15	19	2	1	0	0	0	0	22	7	0	0	0	0	0	0	7
18:30	20	3	0	0	1	0	0	24	5	1	0	0	0	0	0	6
18:45	25	1	0	0	0	0	0	26	4	0	0	0	0	0	0	4
H/TOT	87	12	1	0	1	1	0	102	22	2	0	0	0	0	0	24
P/TOT	275	31	5	0	4	4	0	319	87	7	0	0	0	0	0	94

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 1 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (NW) / UN-NAMED ROAD / THAXTED ROAD (SE) **DAY:** TUESDAY

TIME	TO ARM A THAXTED ROAD (NW)								FROM ARM A THAXTED ROAD (NW)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
07:00	22	9	0	0	0	0	0	31	17	3	0	0	0	0	0	20
07:15	22	12	2	0	0	0	0	36	15	5	2	0	0	1	0	23
07:30	45	16	1	0	2	0	1	65	22	10	0	0	0	0	0	32
07:45	50	10	2	0	0	0	0	62	30	10	1	0	0	0	0	41
H/TOT	139	47	5	0	2	0	1	194	84	28	3	0	0	1	0	116
08:00	35	6	0	0	0	0	0	41	36	4	0	0	0	0	0	40
08:15	44	8	0	0	1	0	0	53	41	8	1	0	2	0	0	52
08:30	62	12	3	0	1	0	0	78	51	6	2	0	0	0	0	59
08:45	53	8	3	0	0	0	0	64	63	7	0	0	0	0	0	70
H/TOT	194	34	6	0	2	0	0	236	191	25	3	0	2	0	0	221
09:00	51	10	2	0	0	0	0	63	59	9	1	1	0	0	0	70
09:15	51	5	2	0	1	0	0	59	44	8	3	0	1	0	0	56
09:30	65	6	0	1	1	0	0	73	44	8	1	0	0	0	0	53
09:45	52	8	1	2	0	0	0	63	70	5	2	3	0	0	0	80
H/TOT	219	29	5	3	2	0	0	258	217	30	7	4	1	0	0	259
P/TOT	552	110	16	3	6	0	1	688	492	83	13	4	3	1	0	596

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 1 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (NW) / UN-NAMED ROAD / THAXTED ROAD (SE) **DAY:** TUESDAY

TIME	TO ARM A THAXTED ROAD (NW)								FROM ARM A THAXTED ROAD (NW)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
16:00	65	7	2	0	0	1	0	75	74	12	2	1	0	2	0	91
16:15	62	5	1	0	1	1	0	70	69	7	3	0	1	0	0	80
16:30	59	8	1	0	0	1	0	69	99	15	3	0	0	1	0	118
16:45	47	6	2	0	1	2	0	58	74	16	1	0	0	1	0	92
H/TOT	233	26	6	0	2	5	0	272	316	50	9	1	1	4	0	381
17:00	60	4	0	0	0	0	0	64	79	4	0	0	0	0	0	83
17:15	50	7	0	0	0	0	0	57	68	5	0	0	2	1	0	76
17:30	54	2	0	0	1	0	0	57	84	5	0	0	0	0	0	89
17:45	54	2	0	0	0	0	0	56	74	8	0	0	0	0	0	82
H/TOT	218	15	0	0	1	0	0	234	305	22	0	0	2	1	0	330
18:00	48	6	0	0	0	1	0	55	74	5	1	0	1	0	0	81
18:15	44	5	1	0	0	0	0	50	45	3	0	0	0	0	0	48
18:30	46	5	0	0	1	0	0	52	50	1	0	0	0	0	0	51
18:45	52	1	0	0	0	0	0	53	49	4	1	0	0	0	1	55
H/TOT	190	17	1	0	1	1	0	210	218	13	2	0	1	0	1	235
P/TOT	641	58	7	0	4	6	0	716	839	85	11	1	4	5	1	946

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 1 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (NW) / UN-NAMED ROAD / THAXTED ROAD (SE) **DAY:** TUESDAY

TIME	TO ARM B UN-NAMED ROAD								FROM ARM B UN-NAMED ROAD							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
07:00	5	2	1	0	0	0	0	8	11	2	0	0	0	0	0	13
07:15	5	6	2	0	0	0	0	13	8	2	1	0	0	0	0	11
07:30	7	4	1	0	0	0	0	12	10	2	1	0	0	0	0	13
07:45	13	4	0	0	0	0	0	17	8	2	1	0	0	0	0	11
H/TOT	30	16	4	0	0	0	0	50	37	8	3	0	0	0	0	48
08:00	14	4	0	0	0	0	0	18	9	6	0	0	0	0	0	15
08:15	16	4	1	0	0	0	0	21	8	2	0	0	0	0	0	10
08:30	44	3	0	0	0	0	0	47	27	3	2	0	0	0	0	32
08:45	50	0	0	1	0	0	0	51	20	2	0	0	0	0	0	22
H/TOT	124	11	1	1	0	0	0	137	64	13	2	0	0	0	0	79
09:00	51	3	0	0	0	0	0	54	33	5	0	0	0	0	0	38
09:15	39	5	1	0	0	0	0	45	35	4	0	0	0	0	0	39
09:30	38	7	0	0	0	0	0	45	43	4	0	1	0	0	0	48
09:45	54	2	1	2	0	0	0	59	43	4	0	0	0	0	0	47
H/TOT	182	17	2	2	0	0	0	203	154	17	0	1	0	0	0	172
P/TOT	336	44	7	3	0	0	0	390	255	38	5	1	0	0	0	299

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 1 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (NW) / UN-NAMED ROAD / THAXTED ROAD (SE) **DAY:** TUESDAY

TIME	TO ARM B UN-NAMED ROAD								FROM ARM B UN-NAMED ROAD							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
16:00	53	5	0	0	0	1	0	59	51	6	0	0	0	0	0	57
16:15	59	4	1	0	0	0	0	64	54	5	0	0	0	1	0	60
16:30	57	8	2	0	0	1	0	68	52	6	1	0	0	0	0	59
16:45	47	5	0	0	0	0	0	52	45	5	1	0	0	1	0	52
H/TOT	216	22	3	0	0	2	0	243	202	22	2	0	0	2	0	228
17:00	43	1	0	0	0	0	0	44	54	2	0	0	0	0	0	56
17:15	39	2	0	0	0	0	0	41	47	6	0	0	0	0	0	53
17:30	40	1	0	0	0	0	0	41	52	1	1	0	0	0	0	54
17:45	40	6	0	0	0	0	0	46	34	2	0	0	0	0	0	36
H/TOT	162	10	0	0	0	0	0	172	187	11	1	0	0	0	0	199
18:00	37	5	0	0	0	0	0	42	32	2	0	0	0	0	0	34
18:15	31	3	0	0	0	0	0	34	33	3	0	0	0	0	0	36
18:30	35	2	0	0	0	0	0	37	33	4	0	0	0	0	0	37
18:45	32	0	0	0	0	0	0	32	33	0	0	0	0	0	0	33
H/TOT	135	10	0	0	0	0	0	145	131	9	0	0	0	0	0	140
P/TOT	513	42	3	0	0	2	0	560	520	42	3	0	0	2	0	567

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 1 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (NW) / UN-NAMED ROAD / THAXTED ROAD (SE) **DAY:** TUESDAY

TIME	TO ARM C THAXTED ROAD (SE)								FROM ARM C THAXTED ROAD (SE)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
07:00	20	3	0	0	0	0	0	23	19	9	1	0	0	0	0	29
07:15	14	3	0	0	0	1	0	18	18	14	1	0	0	0	0	33
07:30	20	7	0	0	0	0	0	27	40	15	1	0	2	0	1	59
07:45	24	6	1	0	0	0	0	31	49	8	1	0	0	0	0	58
H/TOT	78	19	1	0	0	1	0	99	126	46	4	0	2	0	1	179
08:00	26	4	0	0	0	0	0	30	30	4	0	0	0	0	0	34
08:15	32	4	0	0	2	0	0	38	43	6	0	0	1	0	0	50
08:30	23	5	2	0	0	0	0	30	51	11	1	0	1	0	0	64
08:45	32	7	0	0	0	0	0	39	52	6	3	1	0	0	0	62
H/TOT	113	20	2	0	2	0	0	137	176	27	4	1	2	0	0	210
09:00	27	10	1	1	0	0	0	39	37	9	2	0	0	0	0	48
09:15	24	5	2	0	1	0	0	32	35	3	2	0	1	0	0	41
09:30	19	3	1	0	0	0	0	23	35	4	0	0	1	0	0	40
09:45	43	4	2	1	0	0	0	50	36	5	2	2	0	0	0	45
H/TOT	113	22	6	2	1	0	0	144	143	21	6	2	2	0	0	174
P/TOT	304	61	9	2	3	1	0	380	445	94	14	3	6	0	1	563

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 1 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (NW) / UN-NAMED ROAD / THAXTED ROAD (SE) **DAY:** TUESDAY

TIME	TO ARM C THAXTED ROAD (SE)								FROM ARM C THAXTED ROAD (SE)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
16:00	43	11	2	1	0	1	0	58	36	5	2	0	0	1	0	44
16:15	40	6	2	0	1	0	0	49	38	3	1	0	1	0	0	43
16:30	68	9	1	0	0	0	0	78	33	4	0	0	0	1	0	38
16:45	53	15	1	0	0	1	0	70	28	5	1	0	1	1	0	36
H/TOT	204	41	6	1	1	2	0	255	135	17	4	0	2	3	0	161
17:00	59	4	0	0	0	0	0	63	29	3	0	0	0	0	0	32
17:15	55	5	0	0	2	1	0	63	29	3	0	0	0	0	0	32
17:30	65	4	1	0	0	0	0	70	23	1	0	0	1	0	0	25
17:45	51	2	0	0	0	0	0	53	37	0	0	0	0	0	0	37
H/TOT	230	15	1	0	2	1	0	249	118	7	0	0	1	0	0	126
18:00	50	3	1	0	1	0	0	55	29	7	0	0	0	1	0	37
18:15	29	0	0	0	0	0	0	29	26	2	1	0	0	0	0	29
18:30	27	2	0	0	0	0	0	29	25	4	0	0	1	0	0	30
18:45	27	4	1	0	0	0	1	33	29	1	0	0	0	0	0	30
H/TOT	133	9	2	0	1	0	1	146	109	14	1	0	1	1	0	126
P/TOT	567	65	9	1	4	3	1	650	362	38	5	0	4	4	0	413

QUEUE LENGTHS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 1 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (NW) / UN-NAMED ROAD / THAXTED ROAD (SE) **DAY:** TUESDAY

NOTE: Queue Lengths recorded by the number of vehicles queuing at each 5-minute interval, by lane
+ represents where the queue either stretched out of sight or back to the next junction.

TIME	ARM A THAXTED ROAD (NW)	ARM B UN-NAMED ROAD		ARM C THAXTED ROAD (SE)		TIME	ARM A THAXTED ROAD (NW)	ARM B UN-NAMED ROAD		ARM C THAXTED ROAD (SE)	
	LANE 1	LANE 1	LANE 2	LANE 1	LANE 2		LANE 1	LANE 1	LANE 2	LANE 1	LANE 2
07:00	0	0	1	0	0	16:00	0	0	2	0	0
07:05	0	0	0	0	0	16:05	0	0	1	0	0
07:10	0	0	0	0	0	16:10	0	0	0	0	0
07:15	0	0	0	0	0	16:15	0	0	1	0	0
07:20	0	0	0	0	0	16:20	0	0	0	0	0
07:25	0	0	0	0	0	16:25	0	0	0	0	0
07:30	0	0	0	0	0	16:30	0	0	0	0	0
07:35	0	0	0	0	0	16:35	0	0	0	0	1
07:40	0	0	0	0	0	16:40	0	0	0	0	0
07:45	0	0	0	0	0	16:45	0	0	0	0	0
07:50	0	0	0	0	0	16:50	0	0	0	0	0
07:55	0	0	0	0	0	16:55	0	0	1	0	0
08:00	0	0	0	0	0	17:00	0	0	0	0	0
08:05	0	0	0	0	0	17:05	0	0	1	0	0
08:10	0	0	0	0	0	17:10	0	0	0	0	0
08:15	0	0	0	0	0	17:15	0	0	1	0	0
08:20	0	0	0	0	0	17:20	0	1	0	0	0
08:25	0	0	0	0	0	17:25	0	0	0	0	0
08:30	0	0	1	0	0	17:30	0	0	0	0	0
08:35	0	0	0	0	0	17:35	0	0	0	0	0
08:40	0	0	0	0	0	17:40	0	0	0	0	0
08:45	0	0	0	0	0	17:45	0	0	0	0	0
08:50	0	0	0	0	0	17:50	0	0	0	0	0
08:55	0	0	0	0	0	17:55	0	0	0	0	0
09:00	0	0	0	0	0	18:00	0	0	0	0	0
09:05	0	0	0	0	0	18:05	0	0	1	0	0
09:10	0	0	0	0	0	18:10	0	0	0	0	0
09:15	0	0	0	0	0	18:15	0	0	0	0	0
09:20	0	0	0	0	0	18:20	0	0	0	0	0
09:25	0	0	0	0	0	18:25	0	0	0	0	0
09:30	0	0	0	0	0	18:30	0	0	0	0	0
09:35	0	0	0	0	0	18:35	0	0	0	0	0
09:40	0	0	2	0	0	18:40	0	0	0	0	0
09:45	0	0	0	0	0	18:45	0	0	0	0	0
09:50	0	0	1	0	0	18:50	0	0	0	0	0
09:55	0	0	0	0	0	18:55	0	0	0	0	0

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 2 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (N) / ACCESS / THAXTED ROAD (S) **DAY:** TUESDAY

TIME	A TO B FROM THAXTED ROAD (N) TO ACCESS								A TO C FROM THAXTED ROAD (N) TO THAXTED ROAD (S)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
07:00	4	0	0	0	0	0	0	4	17	3	0	0	0	0	0	20
07:15	11	5	0	0	0	0	0	16	15	5	2	0	0	1	0	23
07:30	1	5	0	0	0	0	1	7	25	10	0	0	0	0	0	35
07:45	3	1	0	0	0	0	0	4	27	8	1	0	0	0	0	36
H/TOT	19	11	0	0	0	0	1	31	84	26	3	0	0	1	0	114
08:00	0	0	0	0	0	0	0	0	37	5	0	0	0	0	0	42
08:15	0	0	0	0	0	0	0	0	40	9	1	0	2	0	0	52
08:30	0	0	0	2	0	0	0	2	52	5	2	0	0	0	0	59
08:45	0	3	0	1	0	0	0	4	64	7	0	0	0	0	0	71
H/TOT	0	3	0	3	0	0	0	6	193	26	3	0	2	0	0	224
09:00	0	1	0	0	0	0	0	1	57	10	0	1	0	0	0	68
09:15	0	0	0	1	0	0	0	1	43	7	3	0	1	0	0	54
09:30	0	0	1	1	0	0	0	2	47	7	1	0	0	0	0	55
09:45	1	0	0	0	0	0	0	1	67	6	2	2	0	0	1	78
H/TOT	1	1	1	2	0	0	0	5	214	30	6	3	1	0	1	255
P/TOT	20	15	1	5	0	0	1	42	491	82	12	3	3	1	1	593

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 2 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (N) / ACCESS / THAXTED ROAD (S) **DAY:** TUESDAY

TIME	A TO B FROM THAXTED ROAD (N) TO ACCESS								A TO C FROM THAXTED ROAD (N) TO THAXTED ROAD (S)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
16:00	1	0	0	1	0	0	0	2	76	11	2	0	0	2	0	91
16:15	1	0	0	0	0	0	0	1	69	6	3	0	1	0	0	79
16:30	0	1	0	0	0	0	0	1	98	15	3	0	0	1	0	117
16:45	0	0	0	0	0	0	0	0	76	6	1	0	0	1	0	84
H/TOT	2	1	0	1	0	0	0	4	319	38	9	0	1	4	0	371
17:00	0	0	0	0	0	0	0	0	80	5	0	0	0	0	0	85
17:15	0	0	0	0	0	0	0	0	63	4	0	0	2	1	0	70
17:30	0	0	0	0	0	0	0	0	81	5	0	0	0	0	0	86
17:45	0	0	0	0	0	0	0	0	74	8	0	0	0	0	0	82
H/TOT	0	0	0	0	0	0	0	0	298	22	0	0	2	1	0	323
18:00	0	0	0	0	0	0	0	0	78	5	1	0	1	0	0	85
18:15	0	0	0	0	0	0	0	0	42	2	0	0	0	0	0	44
18:30	1	0	0	0	0	0	0	1	49	1	0	0	0	0	1	51
18:45	0	0	0	0	0	0	0	0	53	4	1	0	0	0	0	58
H/TOT	1	0	0	0	0	0	0	1	222	12	2	0	1	0	1	238
P/TOT	3	1	0	1	0	0	0	5	839	72	11	0	4	5	1	932

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 2 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (N) / ACCESS / THAXTED ROAD (S) **DAY:** TUESDAY

TIME	B TO A FROM ACCESS TO THAXTED ROAD (N)								B TO C FROM ACCESS TO THAXTED ROAD (S)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
H/TOT	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0
09:00	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	1
09:15	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
09:30	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0
09:45	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1
H/TOT	1	2	0	3	0	0	0	6	0	0	1	1	0	0	0	2
P/TOT	1	2	0	5	0	0	0	8	0	1	1	1	0	0	0	3

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 2 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (N) / ACCESS / THAXTED ROAD (S) **DAY:** TUESDAY

TIME	B TO A FROM ACCESS TO THAXTED ROAD (N)								B TO C FROM ACCESS TO THAXTED ROAD (S)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
16:00	3	0	0	0	0	0	0	3	1	1	0	0	0	0	0	2
16:15	3	0	0	0	0	0	0	3	2	1	0	0	0	0	0	3
16:30	5	3	0	0	0	0	0	8	1	0	0	0	0	0	0	1
16:45	6	2	0	0	0	0	1	9	5	8	0	0	0	0	0	13
H/TOT	17	5	0	0	0	0	1	23	9	10	0	0	0	0	0	19
17:00	0	1	0	0	0	0	0	1	1	1	0	0	0	0	0	2
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	1	0	0	0	0	0	1	1	1	0	0	0	0	0	2
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
P/TOT	17	6	0	0	0	0	1	24	11	11	0	0	0	0	0	22

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 2 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (N) / ACCESS / THAXTED ROAD (S) **DAY:** TUESDAY

TIME	C TO A FROM THAXTED ROAD (S) TO THAXTED ROAD (N)								C TO B FROM THAXTED ROAD (S) TO ACCESS							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
07:00	21	3	0	0	0	0	0	24	2	5	0	0	0	0	0	7
07:15	23	6	2	0	0	0	0	31	0	5	0	0	0	0	0	5
07:30	45	9	1	0	2	0	1	58	3	8	0	0	0	0	0	11
07:45	49	9	0	0	0	0	0	58	1	0	1	0	0	0	0	2
H/TOT	138	27	3	0	2	0	1	171	6	18	1	0	0	0	0	25
08:00	36	5	1	0	0	0	0	42	2	0	0	0	0	0	0	2
08:15	46	9	0	0	1	0	0	56	0	0	0	0	0	0	0	0
08:30	63	12	2	0	1	0	0	78	0	0	1	0	0	0	0	1
08:45	55	8	1	0	0	0	0	64	0	0	2	0	0	0	0	2
H/TOT	200	34	4	0	2	0	0	240	2	0	3	0	0	0	0	5
09:00	53	9	1	0	0	0	0	63	0	1	1	0	0	0	0	2
09:15	53	5	2	0	1	0	0	61	0	0	0	0	0	0	0	0
09:30	63	6	0	1	1	0	0	71	2	0	0	0	0	0	0	2
09:45	54	8	1	1	0	0	0	64	1	0	0	1	0	0	0	2
H/TOT	223	28	4	2	2	0	0	259	3	1	1	1	0	0	0	6
P/TOT	561	89	11	2	6	0	1	670	11	19	5	1	0	0	0	36

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 2 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (N) / ACCESS / THAXTED ROAD (S) **DAY:** TUESDAY

TIME	C TO A FROM THAXTED ROAD (S) TO THAXTED ROAD (N)								C TO B FROM THAXTED ROAD (S) TO ACCESS							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
16:00	62	8	2	0	0	1	0	73	0	0	0	0	0	0	0	0
16:15	61	6	1	0	0	1	0	69	0	0	0	0	0	0	0	0
16:30	60	7	1	0	1	1	0	70	0	0	0	0	0	0	0	0
16:45	51	6	2	0	1	1	0	61	0	0	0	0	0	0	0	0
H/TOT	234	27	6	0	2	4	0	273	0	0	0	0	0	0	0	0
17:00	65	4	0	0	0	1	0	70	0	0	0	0	0	0	0	0
17:15	50	7	0	0	0	0	0	57	0	0	0	0	0	0	0	0
17:30	52	2	0	0	1	0	0	55	0	0	0	0	0	0	0	0
17:45	56	2	0	0	0	0	0	58	0	0	0	0	0	0	0	0
H/TOT	223	15	0	0	1	1	0	240	0	0	0	0	0	0	0	0
18:00	46	7	0	0	0	1	0	54	0	0	0	0	0	0	0	0
18:15	43	6	1	0	0	0	0	50	0	0	0	0	0	0	0	0
18:30	50	4	0	0	1	0	0	55	0	0	0	0	0	0	0	0
18:45	51	1	0	0	0	0	0	52	0	0	0	0	0	0	0	0
H/TOT	190	18	1	0	1	1	0	211	0	0	0	0	0	0	0	0
P/TOT	647	60	7	0	4	6	0	724	0	0	0	0	0	0	0	0

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 2 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (N) / ACCESS / THAXTED ROAD (S) **DAY:** TUESDAY

TIME	TO ARM A THAXTED ROAD (N)								FROM ARM A THAXTED ROAD (N)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
07:00	21	3	0	0	0	0	0	24	21	3	0	0	0	0	0	24
07:15	23	6	2	0	0	0	0	31	26	10	2	0	0	1	0	39
07:30	45	9	1	0	2	0	1	58	26	15	0	0	0	0	1	42
07:45	49	9	0	0	0	0	0	58	30	9	1	0	0	0	0	40
H/TOT	138	27	3	0	2	0	1	171	103	37	3	0	0	1	1	145
08:00	36	5	1	0	0	0	0	42	37	5	0	0	0	0	0	42
08:15	46	9	0	0	1	0	0	56	40	9	1	0	2	0	0	52
08:30	63	12	2	2	1	0	0	80	52	5	2	2	0	0	0	61
08:45	55	8	1	0	0	0	0	64	64	10	0	1	0	0	0	75
H/TOT	200	34	4	2	2	0	0	242	193	29	3	3	2	0	0	230
09:00	53	10	1	0	0	0	0	64	57	11	0	1	0	0	0	69
09:15	53	6	2	0	1	0	0	62	43	7	3	1	1	0	0	55
09:30	63	6	0	4	1	0	0	74	47	7	2	1	0	0	0	57
09:45	55	8	1	1	0	0	0	65	68	6	2	2	0	0	1	79
H/TOT	224	30	4	5	2	0	0	265	215	31	7	5	1	0	1	260
P/TOT	562	91	11	7	6	0	1	678	511	97	13	8	3	1	2	635

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 2 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (N) / ACCESS / THAXTED ROAD (S) **DAY:** TUESDAY

TIME	TO ARM A THAXTED ROAD (N)								FROM ARM A THAXTED ROAD (N)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
16:00	65	8	2	0	0	1	0	76	77	11	2	1	0	2	0	93
16:15	64	6	1	0	0	1	0	72	70	6	3	0	1	0	0	80
16:30	65	10	1	0	1	1	0	78	98	16	3	0	0	1	0	118
16:45	57	8	2	0	1	1	1	70	76	6	1	0	0	1	0	84
H/TOT	251	32	6	0	2	4	1	296	321	39	9	1	1	4	0	375
17:00	65	5	0	0	0	1	0	71	80	5	0	0	0	0	0	85
17:15	50	7	0	0	0	0	0	57	63	4	0	0	2	1	0	70
17:30	52	2	0	0	1	0	0	55	81	5	0	0	0	0	0	86
17:45	56	2	0	0	0	0	0	58	74	8	0	0	0	0	0	82
H/TOT	223	16	0	0	1	1	0	241	298	22	0	0	2	1	0	323
18:00	46	7	0	0	0	1	0	54	78	5	1	0	1	0	0	85
18:15	43	6	1	0	0	0	0	50	42	2	0	0	0	0	0	44
18:30	50	4	0	0	1	0	0	55	50	1	0	0	0	0	1	52
18:45	51	1	0	0	0	0	0	52	53	4	1	0	0	0	0	58
H/TOT	190	18	1	0	1	1	0	211	223	12	2	0	1	0	1	239
P/TOT	664	66	7	0	4	6	1	748	842	73	11	1	4	5	1	937

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 2 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (N) / ACCESS / THAXTED ROAD (S) **DAY:** TUESDAY

TIME	TO ARM B ACCESS								FROM ARM B ACCESS							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
07:00	6	5	0	0	0	0	0	11	0	0	0	0	0	0	0	0
07:15	11	10	0	0	0	0	0	21	0	0	0	0	0	0	0	0
07:30	4	13	0	0	0	0	1	18	0	0	0	0	0	0	0	0
07:45	4	1	1	0	0	0	0	6	0	1	0	0	0	0	0	1
H/TOT	25	29	1	0	0	0	1	56	0	1	0	0	0	0	0	1
08:00	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	1	2	0	0	0	3	0	0	0	2	0	0	0	2
08:45	0	3	2	1	0	0	0	6	0	0	0	0	0	0	0	0
H/TOT	2	3	3	3	0	0	0	11	0	0	0	2	0	0	0	2
09:00	0	2	1	0	0	0	0	3	0	1	1	0	0	0	0	2
09:15	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	1
09:30	2	0	1	1	0	0	0	4	0	0	0	3	0	0	0	3
09:45	2	0	0	1	0	0	0	3	1	0	0	1	0	0	0	2
H/TOT	4	2	2	3	0	0	0	11	1	2	1	4	0	0	0	8
P/TOT	31	34	6	6	0	0	1	78	1	3	1	6	0	0	0	11

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 2 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (N) / ACCESS / THAXTED ROAD (S) **DAY:** TUESDAY

TIME	TO ARM B ACCESS								FROM ARM B ACCESS							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
16:00	1	0	0	1	0	0	0	2	4	1	0	0	0	0	0	5
16:15	1	0	0	0	0	0	0	1	5	1	0	0	0	0	0	6
16:30	0	1	0	0	0	0	0	1	6	3	0	0	0	0	0	9
16:45	0	0	0	0	0	0	0	0	11	10	0	0	0	0	1	22
H/TOT	2	1	0	1	0	0	0	4	26	15	0	0	0	0	1	42
17:00	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	3
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	3
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
P/TOT	3	1	0	1	0	0	0	5	28	17	0	0	0	0	1	46

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 2 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (N) / ACCESS / THAXTED ROAD (S) **DAY:** TUESDAY

TIME	TO ARM C THAXTED ROAD (S)								FROM ARM C THAXTED ROAD (S)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
07:00	17	3	0	0	0	0	0	20	23	8	0	0	0	0	0	31
07:15	15	5	2	0	0	1	0	23	23	11	2	0	0	0	0	36
07:30	25	10	0	0	0	0	0	35	48	17	1	0	2	0	1	69
07:45	27	9	1	0	0	0	0	37	50	9	1	0	0	0	0	60
H/TOT	84	27	3	0	0	1	0	115	144	45	4	0	2	0	1	196
08:00	37	5	0	0	0	0	0	42	38	5	1	0	0	0	0	44
08:15	40	9	1	0	2	0	0	52	46	9	0	0	1	0	0	56
08:30	52	5	2	0	0	0	0	59	63	12	3	0	1	0	0	79
08:45	64	7	0	0	0	0	0	71	55	8	3	0	0	0	0	66
H/TOT	193	26	3	0	2	0	0	224	202	34	7	0	2	0	0	245
09:00	57	10	1	1	0	0	0	69	53	10	2	0	0	0	0	65
09:15	43	7	3	0	1	0	0	54	53	5	2	0	1	0	0	61
09:30	47	7	1	0	0	0	0	55	65	6	0	1	1	0	0	73
09:45	67	6	2	3	0	0	1	79	55	8	1	2	0	0	0	66
H/TOT	214	30	7	4	1	0	1	257	226	29	5	3	2	0	0	265
P/TOT	491	83	13	4	3	1	1	596	572	108	16	3	6	0	1	706

MANUAL CLASSIFIED COUNTS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 2 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (N) / ACCESS / THAXTED ROAD (S) **DAY:** TUESDAY

TIME	TO ARM C THAXTED ROAD (S)								FROM ARM C THAXTED ROAD (S)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
16:00	77	12	2	0	0	2	0	93	62	8	2	0	0	1	0	73
16:15	71	7	3	0	1	0	0	82	61	6	1	0	0	1	0	69
16:30	99	15	3	0	0	1	0	118	60	7	1	0	1	1	0	70
16:45	81	14	1	0	0	1	0	97	51	6	2	0	1	1	0	61
H/TOT	328	48	9	0	1	4	0	390	234	27	6	0	2	4	0	273
17:00	81	6	0	0	0	0	0	87	65	4	0	0	0	1	0	70
17:15	63	4	0	0	2	1	0	70	50	7	0	0	0	0	0	57
17:30	81	5	0	0	0	0	0	86	52	2	0	0	1	0	0	55
17:45	74	8	0	0	0	0	0	82	56	2	0	0	0	0	0	58
H/TOT	299	23	0	0	2	1	0	325	223	15	0	0	1	1	0	240
18:00	78	5	1	0	1	0	0	85	46	7	0	0	0	1	0	54
18:15	42	2	0	0	0	0	0	44	43	6	1	0	0	0	0	50
18:30	50	1	0	0	0	0	1	52	50	4	0	0	1	0	0	55
18:45	53	4	1	0	0	0	0	58	51	1	0	0	0	0	0	52
H/TOT	223	12	2	0	1	0	1	239	190	18	1	0	1	1	0	211
P/TOT	850	83	11	0	4	5	1	954	647	60	7	0	4	6	0	724

QUEUE LENGTHS

JOB REF: 11719

JOB NAME: SAFFRON WALDEN

SITE: 2 **DATE:** 04/10/2022

LOCATION: THAXTED ROAD (N) / ACCESS / THAXTED ROAD (S) **DAY:** TUESDAY

NOTE: Queue Lengths recorded by the number of vehicles queuing at each 5-minute interval, by lane
+ represents where the queue either stretched out of sight or back to the next junction.

TIME	ARM A THAXTED ROAD (N)	ARM B ACCESS		ARM C THAXTED ROAD (S)		TIME	ARM A THAXTED ROAD (N)	ARM B ACCESS		ARM C THAXTED ROAD (S)	
	LANE 1	LANE 1	LANE 2	LANE 1	LANE 2		LANE 1	LANE 1	LANE 2	LANE 1	LANE 2
07:00	1	0	0	0	1	16:00	0	1	0	3	0
07:05	1	0	0	0	1	16:05	1	1	0	0	0
07:10	1	0	0	0	0	16:10	1	0	0	0	0
07:15	1	0	0	0	1	16:15	0	0	0	0	0
07:20	1	0	0	1	1	16:20	3	1	0	0	0
07:25	1	0	0	0	1	16:25	0	1	0	1	0
07:30	1	0	0	3	1	16:30	3	2	0	2	0
07:35	1	0	0	1	1	16:35	0	0	0	0	0
07:40	1	0	0	2	1	16:40	0	1	0	0	0
07:45	1	0	0	0	1	16:45	2	1	0	1	0
07:50	0	0	0	0	0	16:50	2	1	0	0	0
07:55	2	1	0	2	1	16:55	2	1	0	1	0
08:00	0	0	0	0	1	17:00	3	1	0	1	0
08:05	0	0	0	0	0	17:05	0	0	0	3	0
08:10	1	0	0	0	1	17:10	0	0	0	0	0
08:15	0	0	0	3	0	17:15	4	0	0	0	0
08:20	0	0	0	0	0	17:20	0	0	0	0	0
08:25	0	0	0	0	0	17:25	0	0	0	0	0
08:30	0	0	0	6	0	17:30	0	0	0	0	0
08:35	2	0	0	1	1	17:35	0	0	0	0	0
08:40	1	1	0	1	0	17:40	0	0	0	0	0
08:45	0	0	0	0	0	17:45	0	0	0	0	0
08:50	0	0	0	0	0	17:50	0	0	0	0	0
08:55	1	0	0	1	1	17:55	2	0	0	0	0
09:00	0	0	0	0	0	18:00	0	0	0	0	0
09:05	2	0	0	0	0	18:05	0	0	0	0	0
09:10	1	1	0	0	1	18:10	0	0	0	0	0
09:15	0	0	0	0	0	18:15	0	0	0	0	0
09:20	0	0	0	0	0	18:20	0	0	0	0	0
09:25	0	0	0	0	0	18:25	0	0	0	0	0
09:30	1	1	0	1	1	18:30	0	0	0	0	0
09:35	1	0	0	2	1	18:35	0	0	0	0	0
09:40	0	0	0	0	0	18:40	0	0	0	0	0
09:45	5	1	0	6	0	18:45	0	0	0	0	0
09:50	1	0	0	0	0	18:50	0	0	0	0	0
09:55	1	1	0	1	0	18:55	0	0	0	0	0

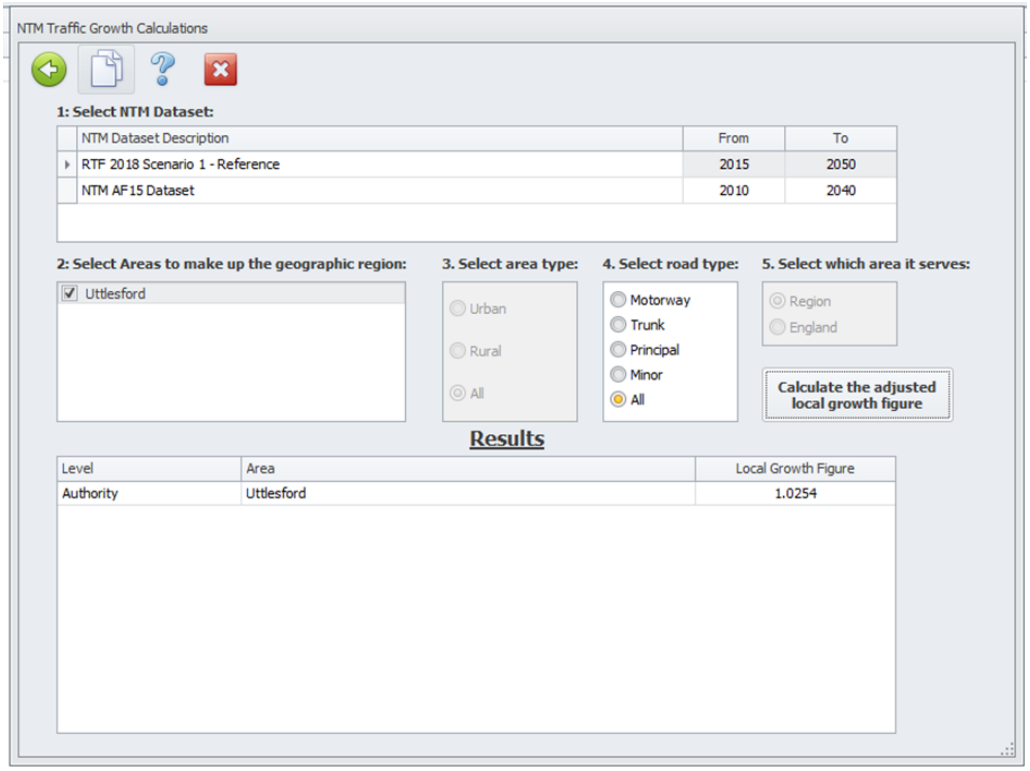
Appendix 8

TEMPRO (v7.2) Growth Rates

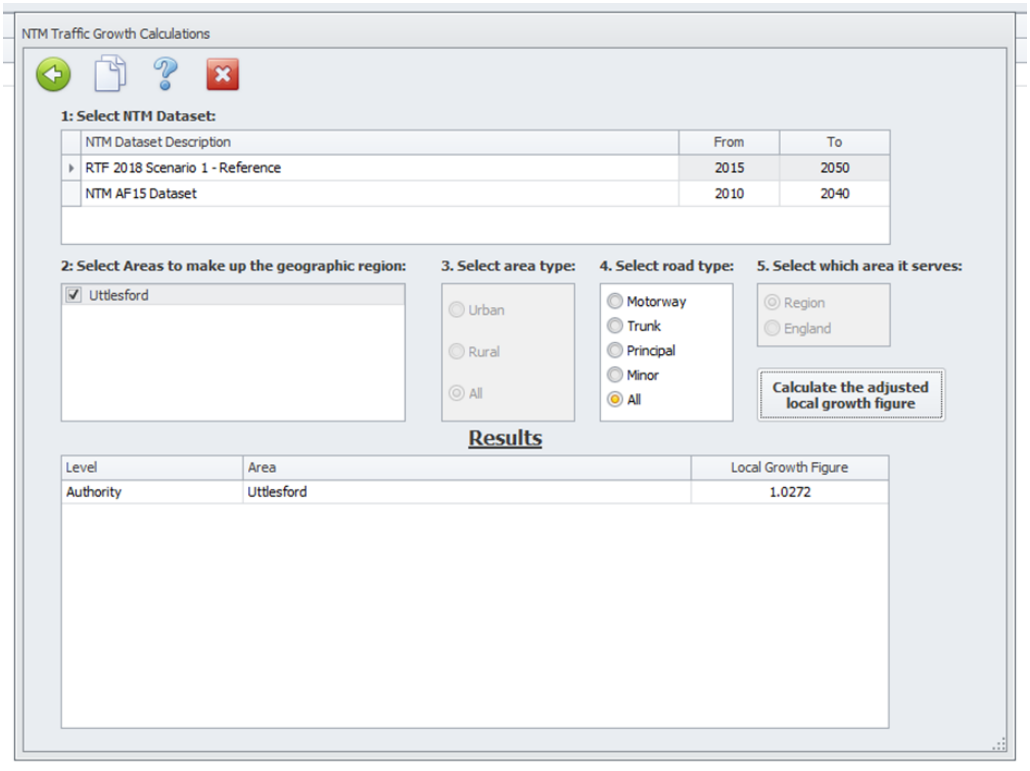
Assessment Parameters:

- Base Year: 2022
- Future Year: 2028
- Location: Uttlesford (Authority)
- Road Type: All
- Alternative Assumptions (accounting for Committed Development): Future HH = 38,917 (Originals = 37,555)

Weekday AM Peak Period - Growth Rate: 1.0254



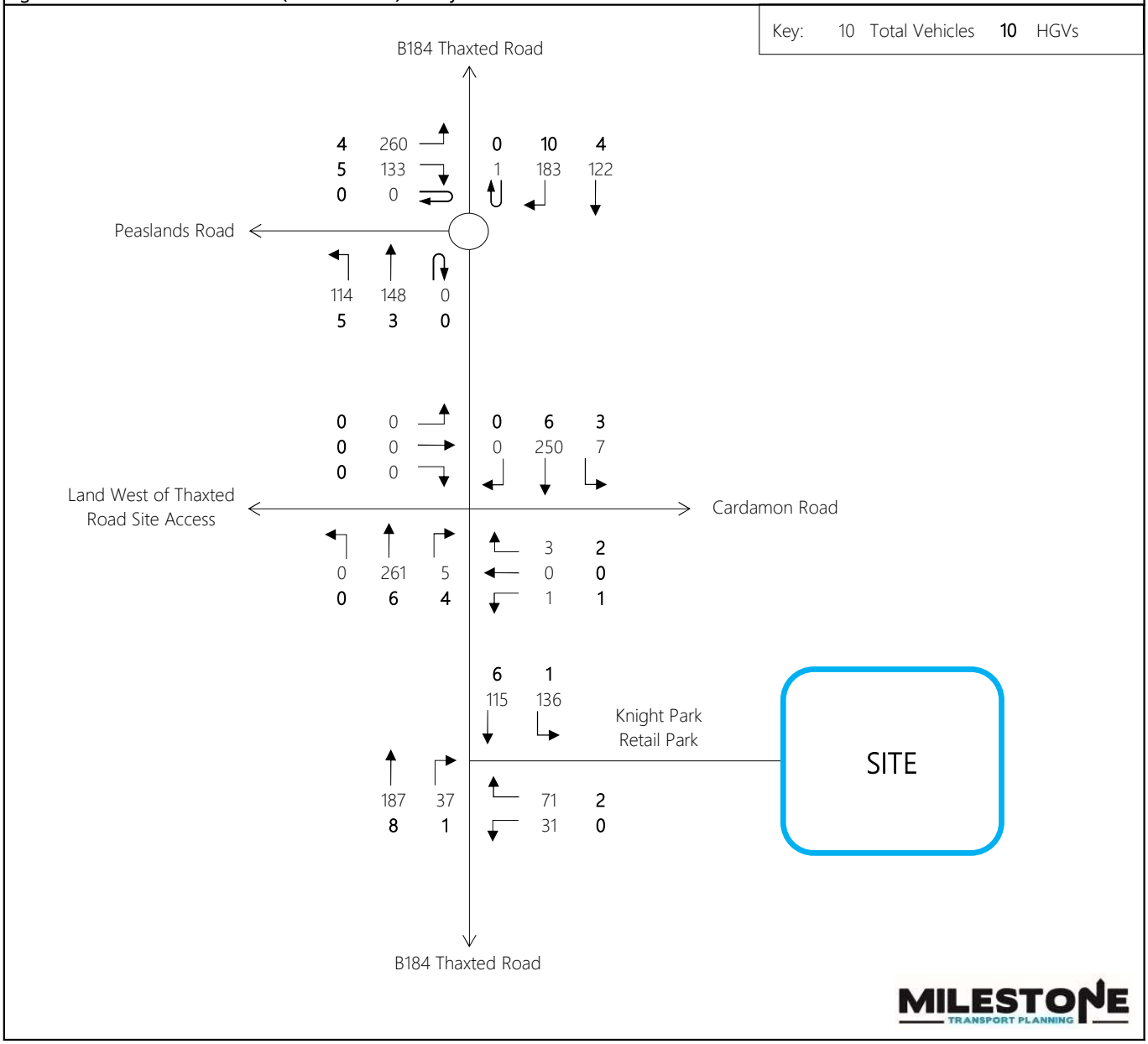
Weekday PM Peak Period - Growth Rate: 1.0272



Appendix 9

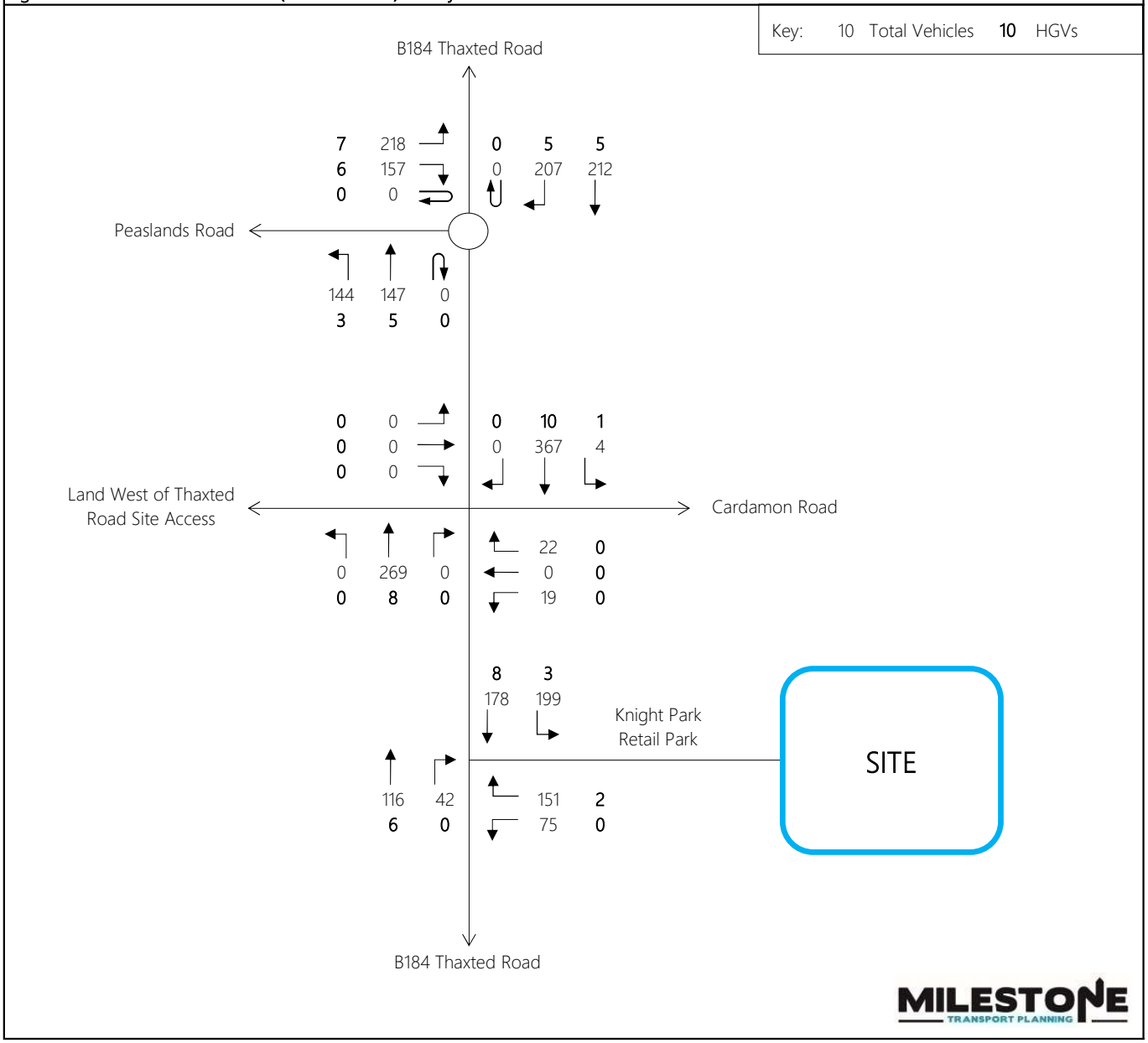
23075 - Traffic Flow Diagrams

Figure 1 2022 AM Peak (08:15-09:15hrs) Surveyed Network Flows



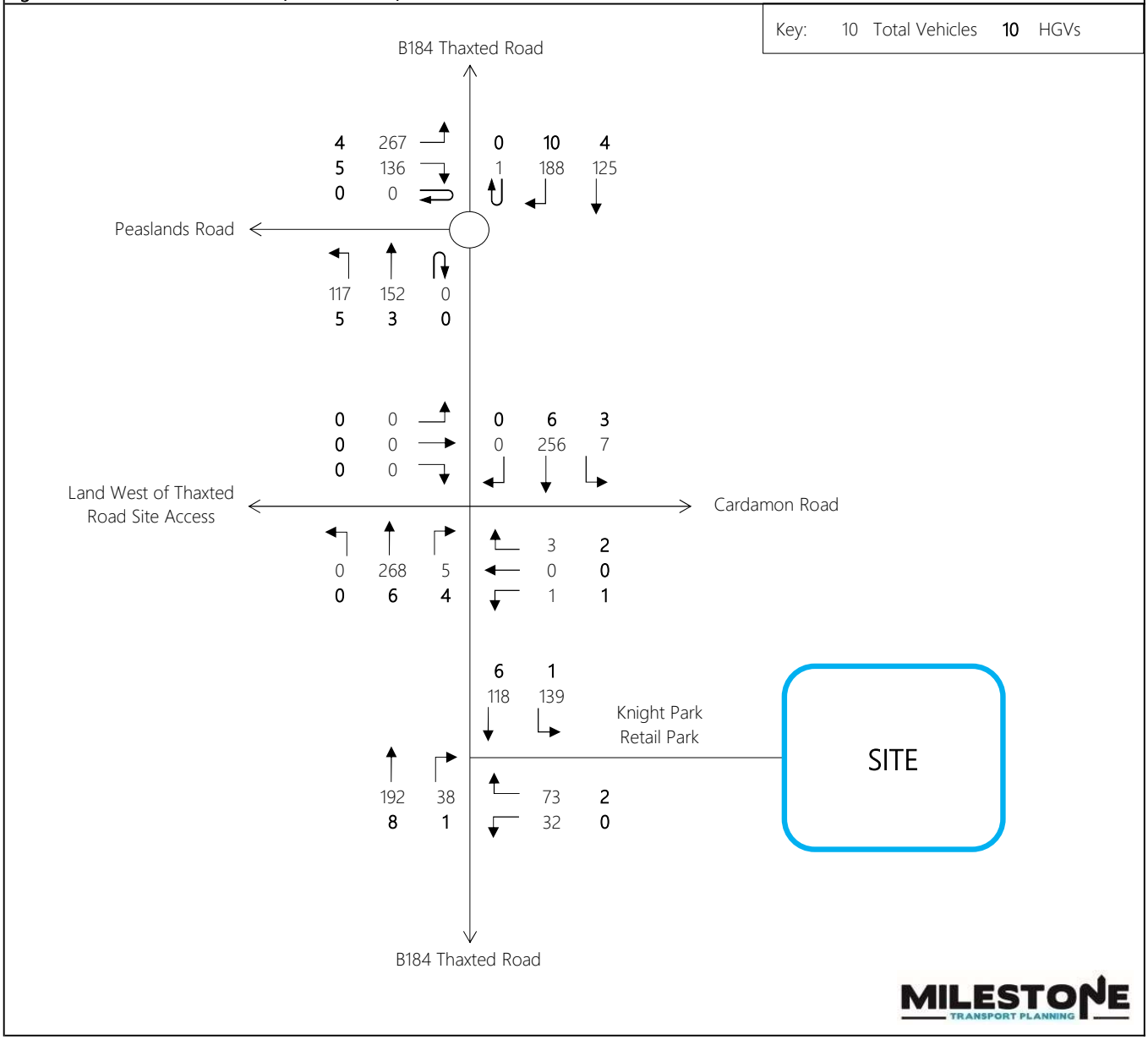
23075 - Traffic Flow Diagrams

Figure 2 2022 PM Peak (16:00-17:00hrs) Surveyed Network Flows



23075 - Traffic Flow Diagrams

Figure 3 2028 AM Peak (08:15-09:15hrs) Base Flows



23075 - Traffic Flow Diagrams

Figure 4 2028 PM Peak (16:00-17:00hrs) Base Flows

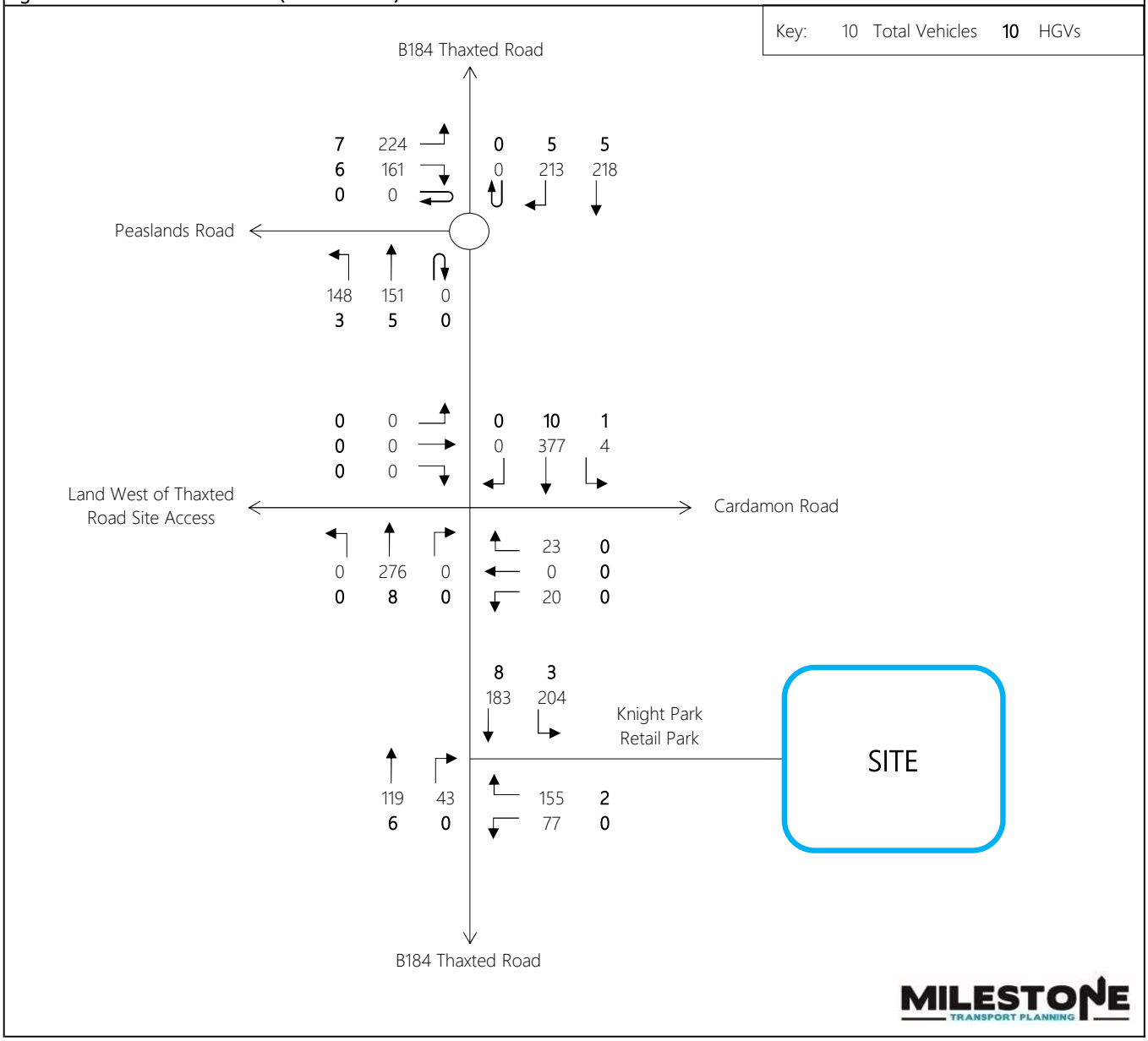


Figure 5 AM Peak Committed Development Flows

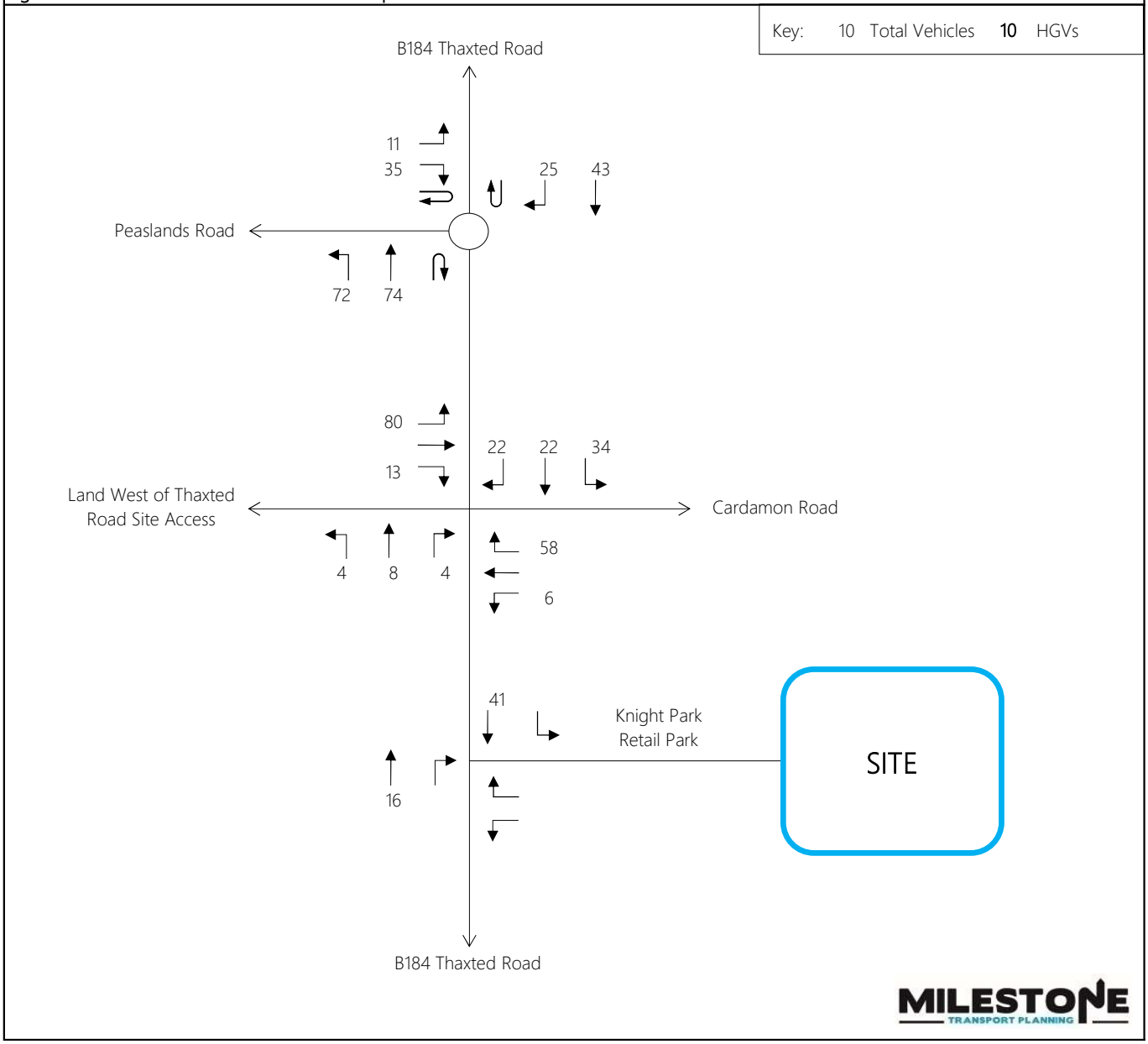
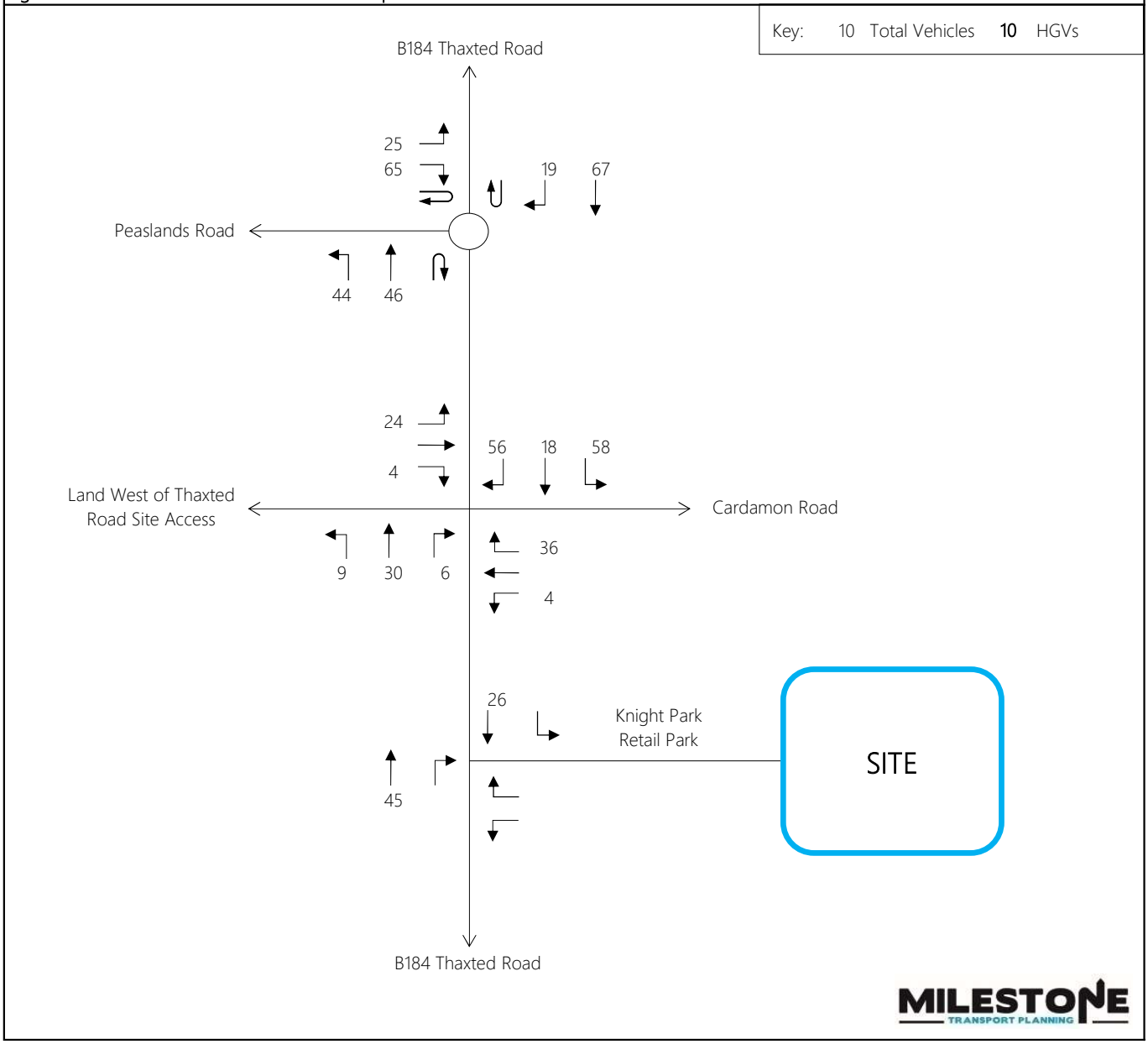
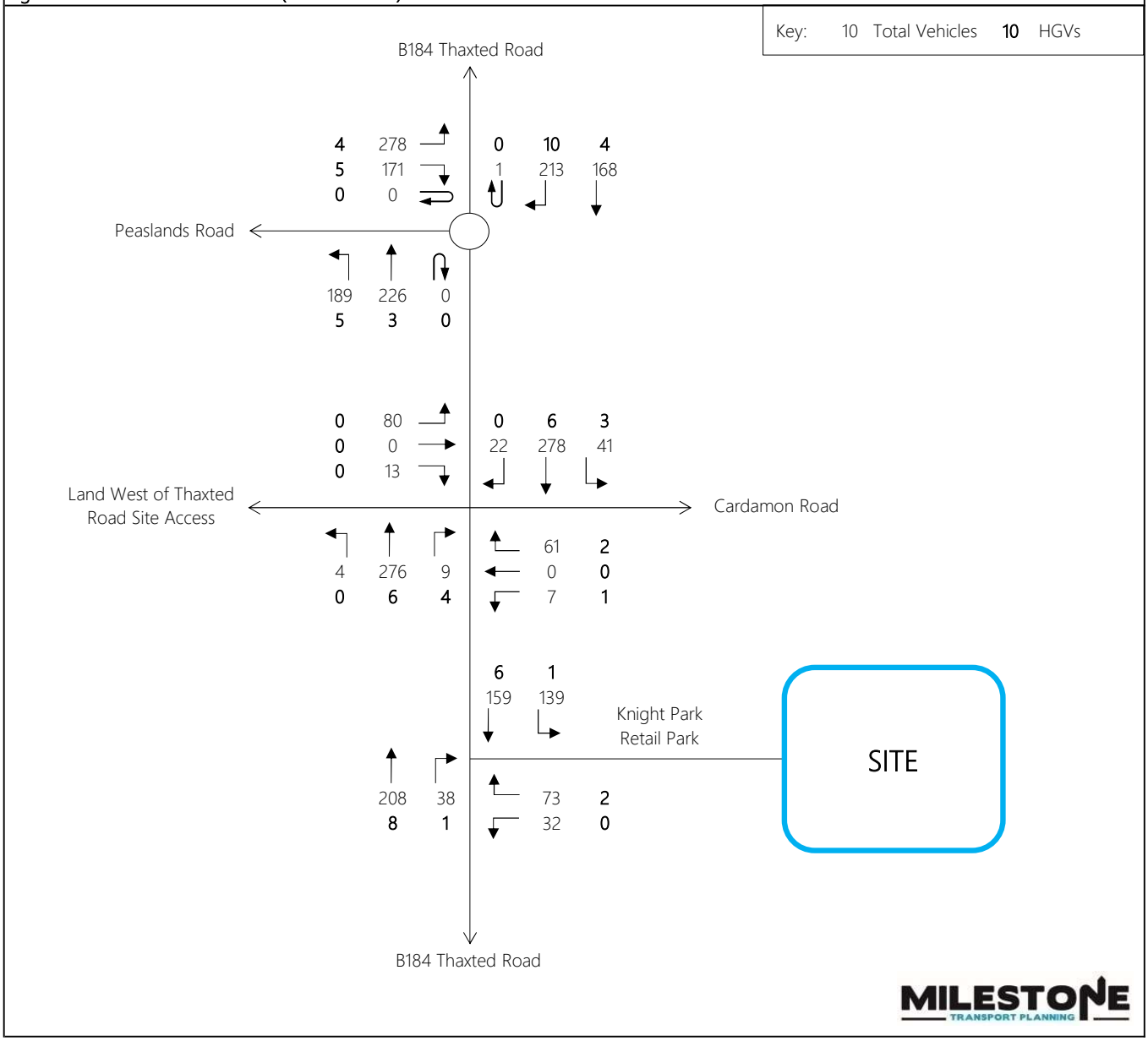


Figure 6 PM Peak Committed Development Flows



23075 - Traffic Flow Diagrams

Figure 7 2028 AM Peak (08:15-09:15hrs) Base + Committed Flows



23075 - Traffic Flow Diagrams

Figure 8 2028 PM Peak (16:00-17:00hrs) Base + Committed Flows

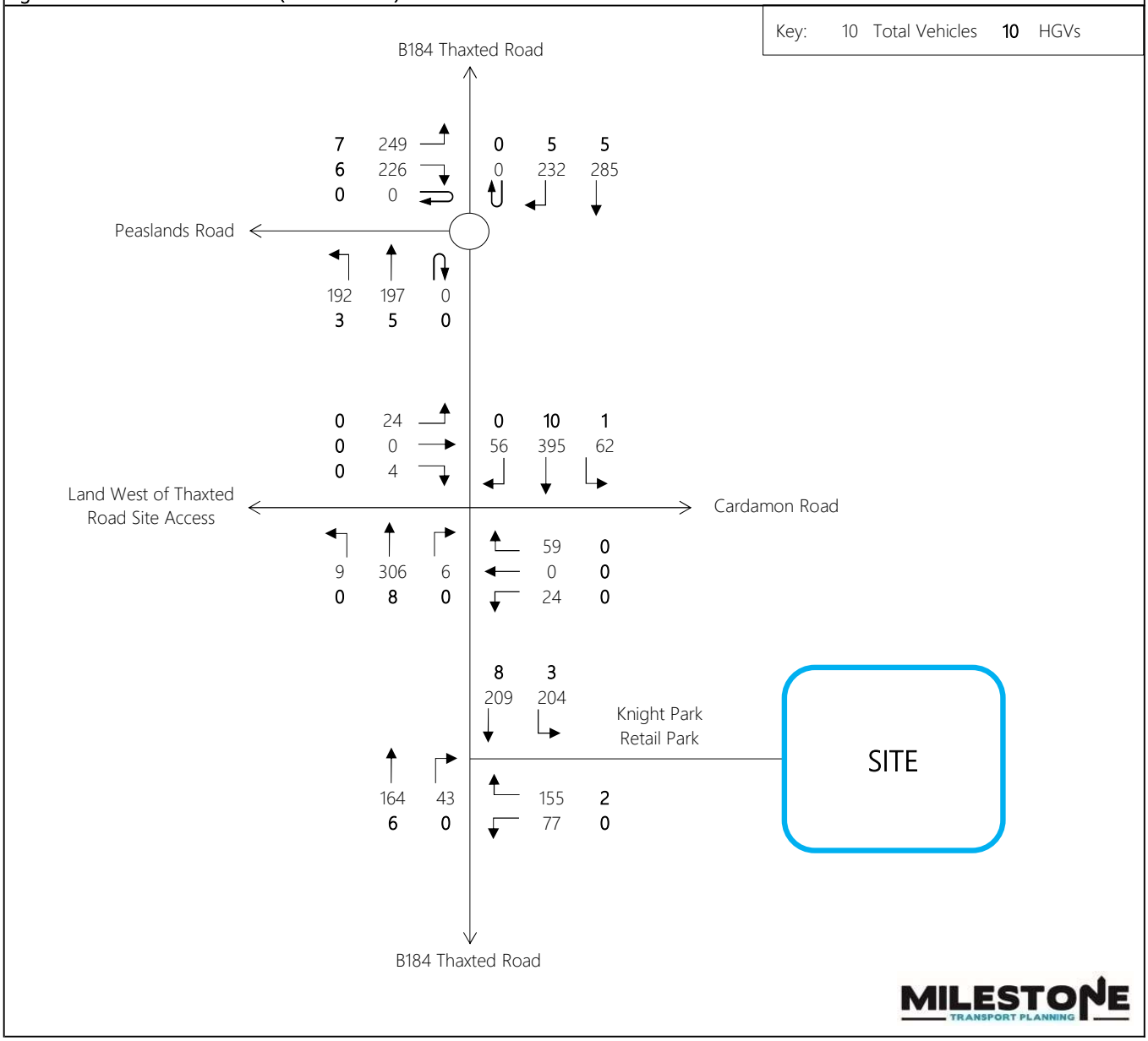
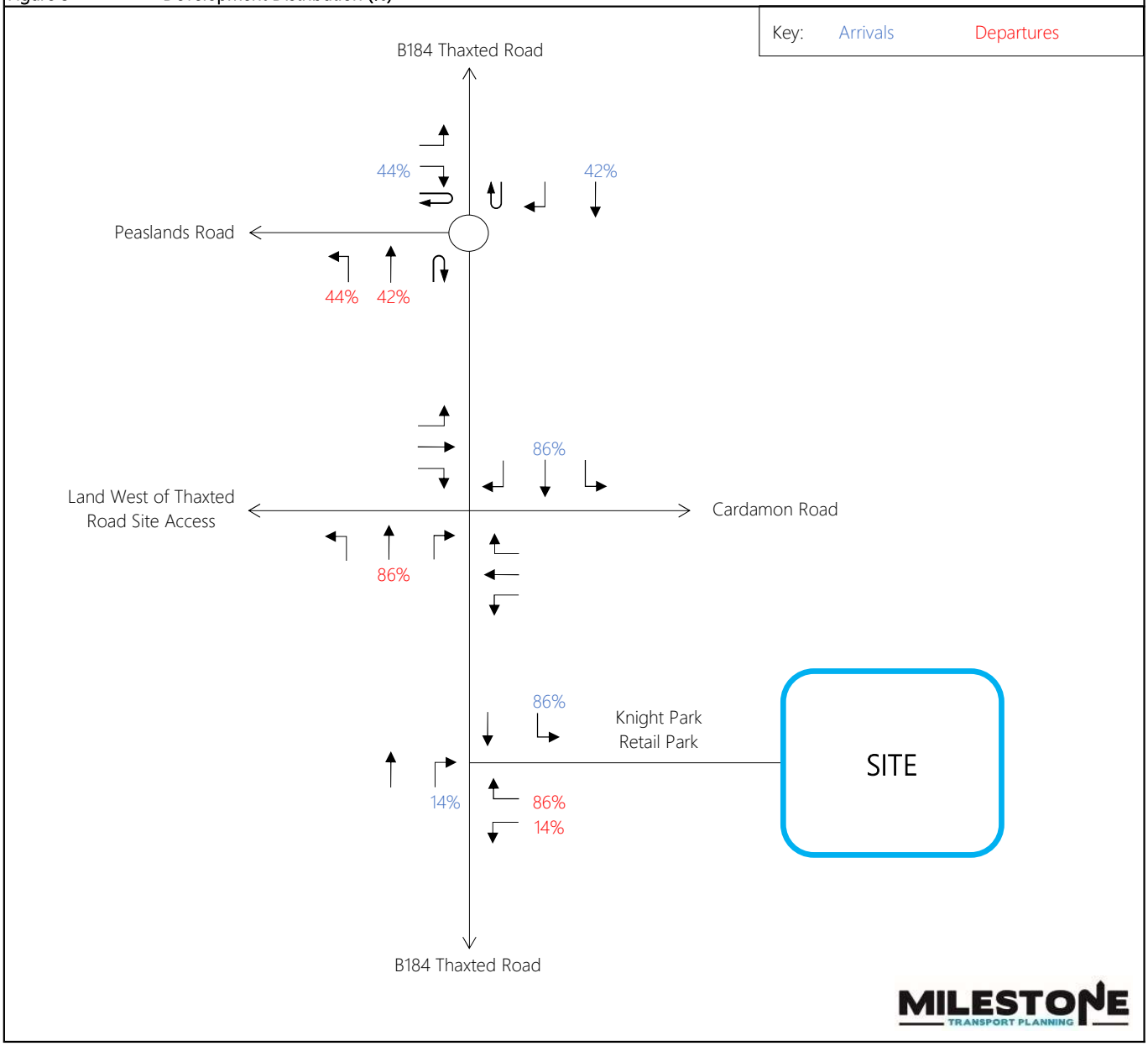
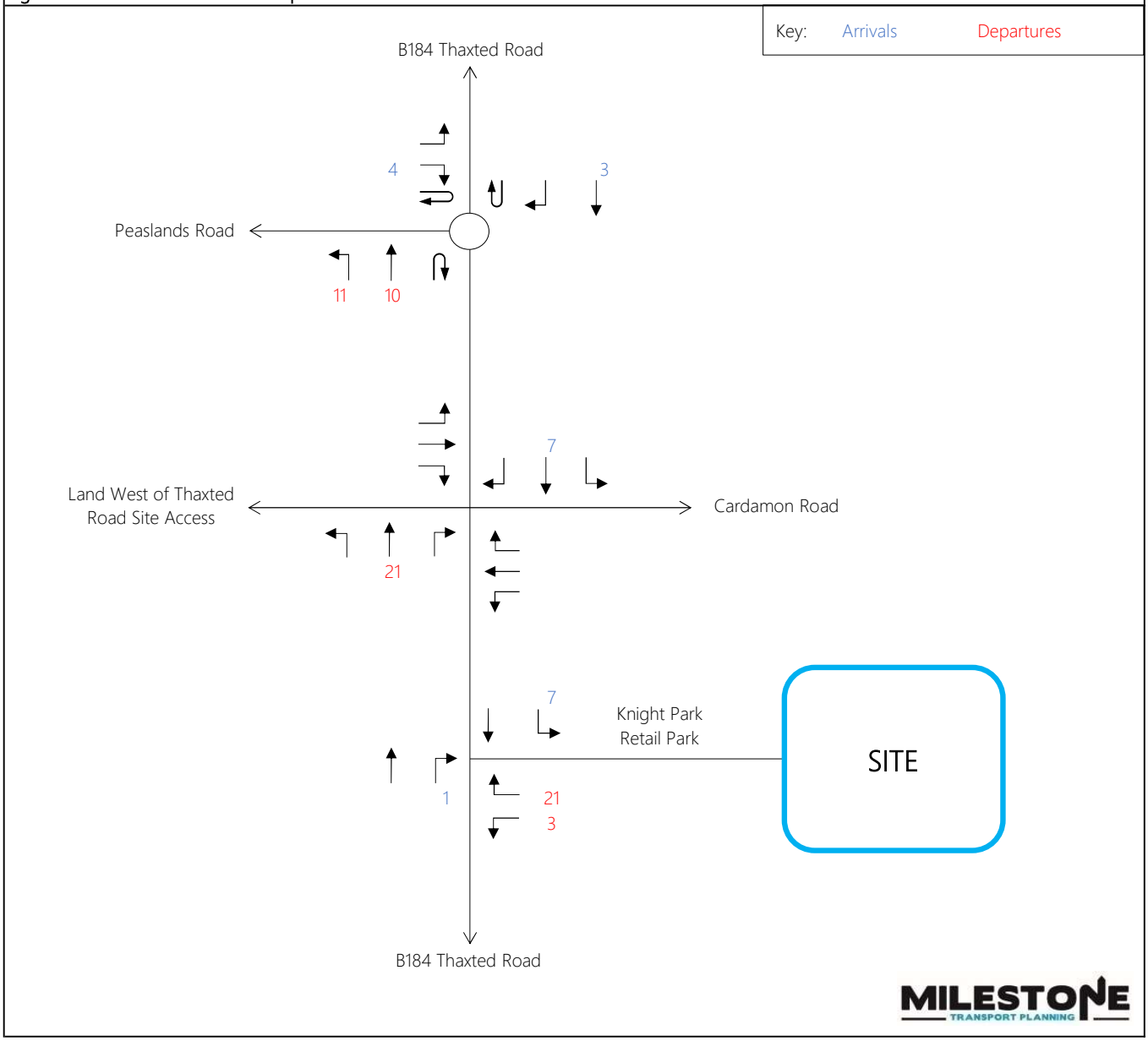


Figure 9 Development Distribution (%)



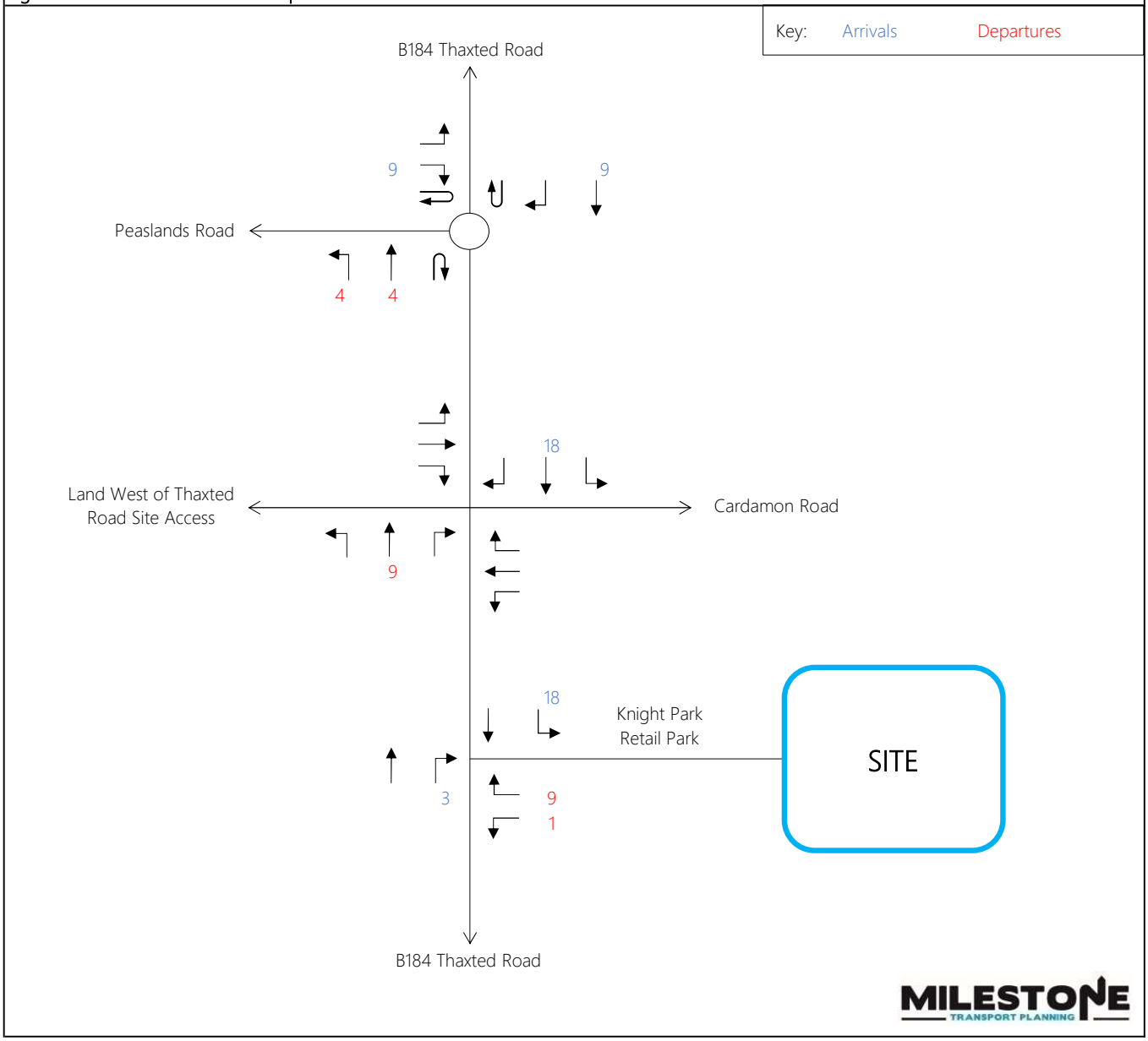
23075 - Traffic Flow Diagrams

Figure 10 AM Peak Development Flows



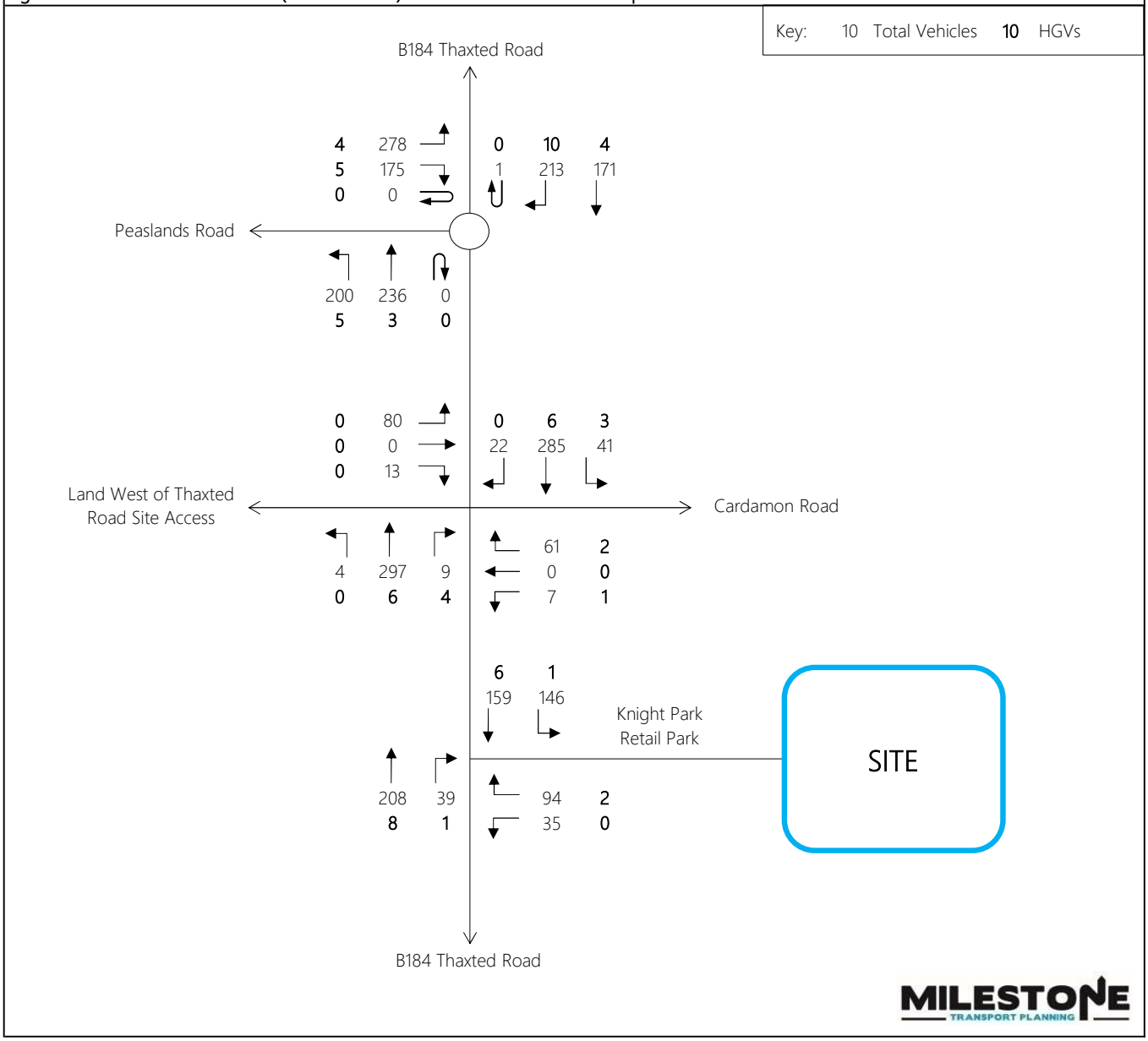
23075 - Traffic Flow Diagrams

Figure 11 PM Peak Development Flows



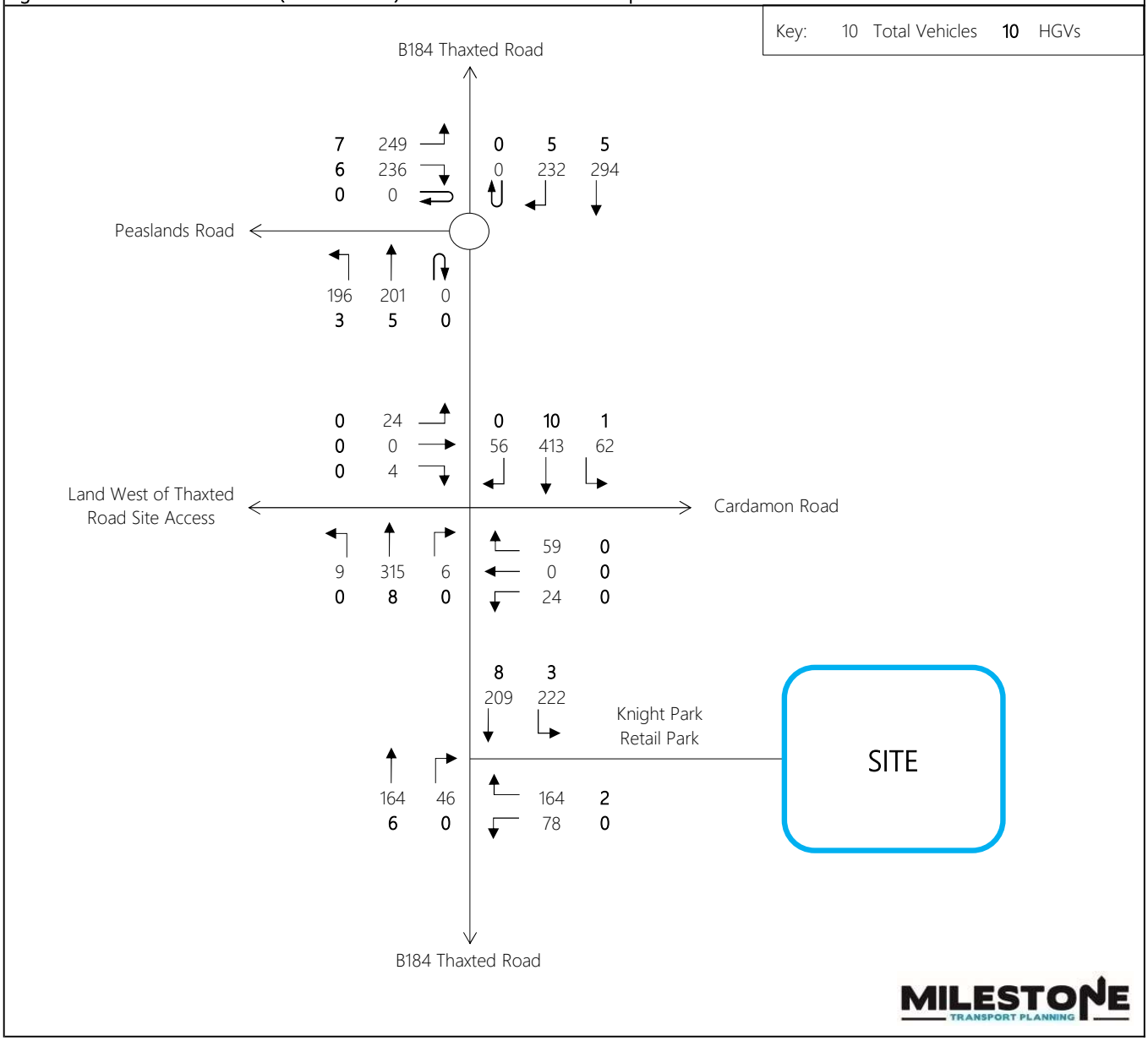
23075 - Traffic Flow Diagrams

Figure 12 2028 AM Peak (08:15-09:15hrs) Base + Committed + Development Flows



23075 - Traffic Flow Diagrams

Figure 13 2028 PM Peak (16:00-17:00hrs) Base + Committed + Development Flows



Appendix 10

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.0.1820

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: 23075 - B184-Knight Park Retail Park (Site Access) Rev A.j10
Path: P:\23 Jobs\075 Saffron Walden Site 3 (Land NE Thaxted Rd)\Technical Assessments\Modelling
Report generation date: 29/11/2023 13:01:23

Summary of junction performance

	AM					PM				
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)
	2022 Base									
Stream B-C	0.1	6.77	0.06	A	1.88	0.2	8.32	0.16	A	3.63
Stream B-A	0.2	9.55	0.17	A		0.6	12.88	0.37	B	
Stream C-AB	0.1	5.53	0.06	A		0.1	5.79	0.07	A	
	2028 Base + CD									
Stream B-C	0.1	6.97	0.06	A	1.80	0.2	8.63	0.17	A	3.57
Stream B-A	0.2	10.07	0.18	B		0.7	14.04	0.40	B	
Stream C-AB	0.1	5.67	0.06	A		0.1	5.92	0.07	A	
	2028 Base + CD + Dev									
Stream B-C	0.1	7.20	0.07	A	2.13	0.2	8.82	0.17	A	3.77
Stream B-A	0.3	10.55	0.23	B		0.7	14.72	0.42	B	
Stream C-AB	0.1	5.71	0.06	A		0.1	6.01	0.08	A	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

File summary

File Description

Title	
Location	
Site number	
Date	07/11/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	mtp\MTPGeneral
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base	AM	ONE HOUR	08:00	09:30	15	✓
D2	2022 Base	PM	ONE HOUR	15:45	17:15	15	✓
D3	2028 Base + CD	AM	ONE HOUR	08:00	09:30	15	✓
D4	2028 Base + CD	PM	ONE HOUR	15:45	17:15	15	✓
D5	2028 Base + CD + Dev	AM	ONE HOUR	08:00	09:30	15	✓
D6	2028 Base + CD + Dev	PM	ONE HOUR	15:45	17:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2022 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.88	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.88	A

Arms

Arms

Arm	Name	Description	Arm type
A	B184 Thaxted Road (N)		Major
B	Site Access		Minor
C	B184 Thaxted Road (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - B184 Thaxted Road (S)	6.00		✓	3.25	250.0	✓	12.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Site Access	One lane plus flare	10.00	9.70	5.70	5.00	4.50	✓	3.00	46	40

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	570	0.104	0.263	0.165	0.375
B-C	639	0.098	0.248	-	-
C-B	801	0.310	0.310	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - B184 Thaxted Road (N)		ONE HOUR	✓	251	100.000
B - Site Access		ONE HOUR	✓	102	100.000
C - B184 Thaxted Road (S)		ONE HOUR	✓	224	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - B184 Thaxted Road (N)	B - Site Access	C - B184 Thaxted Road (S)
From	A - B184 Thaxted Road (N)	0	136	115
	B - Site Access	71	0	31
	C - B184 Thaxted Road (S)	187	37	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
		A - B184 Thaxted Road (N)	B - Site Access	C - B184 Thaxted Road (S)
From	A - B184 Thaxted Road (N)	0	1	5
	B - Site Access	3	0	0
	C - B184 Thaxted Road (S)	4	3	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.06	6.77	0.1	A	28	43
B-A	0.17	9.55	0.2	A	65	98
C-AB	0.06	5.53	0.1	A	34	51
C-A					172	257
A-B					125	187
A-C					106	158

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	23	6	590	0.040	23	0.0	0.0	6.352	A
B-A	53	13	486	0.110	53	0.0	0.1	8.299	A
C-AB	28	7	719	0.039	28	0.0	0.0	5.206	A
C-A	141	35			141				
A-B	102	26			102				
A-C	87	22			87				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	28	7	580	0.048	28	0.0	0.1	6.524	A
B-A	64	16	473	0.135	64	0.1	0.2	8.789	A
C-AB	33	8	708	0.047	33	0.0	0.0	5.337	A
C-A	168	42			168				
A-B	122	31			122				
A-C	103	26			103				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	34	9	566	0.060	34	0.1	0.1	6.773	A
B-A	78	20	455	0.172	78	0.2	0.2	9.543	A
C-AB	41	10	692	0.059	41	0.0	0.1	5.527	A
C-A	206	51			206				
A-B	150	37			150				
A-C	127	32			127				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	34	9	565	0.060	34	0.1	0.1	6.774	A
B-A	78	20	455	0.172	78	0.2	0.2	9.552	A
C-AB	41	10	692	0.059	41	0.1	0.1	5.527	A
C-A	206	51			206				
A-B	150	37			150				
A-C	127	32			127				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	28	7	579	0.048	28	0.1	0.1	6.530	A
B-A	64	16	473	0.135	64	0.2	0.2	8.802	A
C-AB	33	8	708	0.047	33	0.1	0.0	5.340	A
C-A	168	42			168				
A-B	122	31			122				
A-C	103	26			103				

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	23	6	589	0.040	23	0.1	0.0	6.359	A
B-A	53	13	486	0.110	54	0.2	0.1	8.324	A
C-AB	28	7	719	0.039	28	0.0	0.0	5.210	A
C-A	141	35			141				
A-B	102	26			102				
A-C	87	22			87				

2022 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		3.63	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.63	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022 Base	PM	ONE HOUR	15:45	17:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - B184 Thaxted Road (N)		ONE HOUR	✓	377	100.000
B - Site Access		ONE HOUR	✓	226	100.000
C - B184 Thaxted Road (S)		ONE HOUR	✓	158	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - B184 Thaxted Road (N)	B - Site Access	C - B184 Thaxted Road (S)
From	A - B184 Thaxted Road (N)	0	199	178
	B - Site Access	151	0	75
	C - B184 Thaxted Road (S)	116	42	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
		A - B184 Thaxted Road (N)	B - Site Access	C - B184 Thaxted Road (S)
From	A - B184 Thaxted Road (N)	0	2	4
	B - Site Access	1	0	0
	C - B184 Thaxted Road (S)	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.16	8.32	0.2	A	69	103
B-A	0.37	12.88	0.6	B	139	208
C-AB	0.07	5.79	0.1	A	39	58
C-A					106	160
A-B					183	274
A-C					163	245

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	56	14	560	0.101	56	0.0	0.1	7.137	A
B-A	114	28	482	0.236	112	0.0	0.3	9.715	A
C-AB	32	8	710	0.045	31	0.0	0.0	5.302	A
C-A	87	22			87				
A-B	150	37			150				
A-C	134	34			134				

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	67	17	542	0.124	67	0.1	0.1	7.583	A
B-A	136	34	467	0.291	135	0.3	0.4	10.852	B
C-AB	38	9	693	0.055	38	0.0	0.1	5.496	A
C-A	104	26			104				
A-B	179	45			179				
A-C	160	40			160				

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	83	21	516	0.160	82	0.1	0.2	8.303	A
B-A	166	42	446	0.373	166	0.4	0.6	12.817	B
C-AB	46	12	668	0.069	46	0.1	0.1	5.786	A
C-A	128	32			128				
A-B	219	55			219				
A-C	196	49			196				

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	83	21	515	0.160	83	0.2	0.2	8.316	A
B-A	166	42	446	0.373	166	0.6	0.6	12.879	B
C-AB	46	12	668	0.069	46	0.1	0.1	5.786	A
C-A	128	32			128				
A-B	219	55			219				
A-C	196	49			196				

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	67	17	541	0.125	68	0.2	0.1	7.603	A
B-A	136	34	467	0.291	136	0.6	0.4	10.921	B
C-AB	38	9	693	0.055	38	0.1	0.1	5.500	A
C-A	104	26			104				
A-B	179	45			179				
A-C	160	40			160				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	56	14	559	0.101	57	0.1	0.1	7.164	A
B-A	114	28	482	0.236	114	0.4	0.3	9.799	A
C-AB	32	8	710	0.045	32	0.1	0.0	5.305	A
C-A	87	22			87				
A-B	150	37			150				
A-C	134	34			134				

2028 Base + CD, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.80	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.80	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2028 Base + CD	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - B184 Thaxted Road (N)		ONE HOUR	✓	298	100.000
B - Site Access		ONE HOUR	✓	105	100.000
C - B184 Thaxted Road (S)		ONE HOUR	✓	246	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - B184 Thaxted Road (N)	B - Site Access	C - B184 Thaxted Road (S)
From	A - B184 Thaxted Road (N)	0	139	159
	B - Site Access	73	0	32
	C - B184 Thaxted Road (S)	208	38	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
		A - B184 Thaxted Road (N)	B - Site Access	C - B184 Thaxted Road (S)
From	A - B184 Thaxted Road (N)	0	1	4
	B - Site Access	3	0	0
	C - B184 Thaxted Road (S)	4	3	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.06	6.97	0.1	A	29	44
B-A	0.18	10.07	0.2	B	67	100
C-AB	0.06	5.67	0.1	A	35	52
C-A					191	286
A-B					128	191
A-C					146	219

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	24	6	581	0.041	24	0.0	0.0	6.464	A
B-A	55	14	474	0.116	54	0.0	0.1	8.561	A
C-AB	29	7	708	0.040	28	0.0	0.0	5.294	A
C-A	157	39			157				
A-B	105	26			105				
A-C	120	30			120				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	29	7	569	0.051	29	0.0	0.1	6.666	A
B-A	66	16	459	0.143	65	0.1	0.2	9.144	A
C-AB	34	9	695	0.049	34	0.0	0.1	5.449	A
C-A	187	47			187				
A-B	125	31			125				
A-C	143	36			143				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	35	9	552	0.064	35	0.1	0.1	6.965	A
B-A	80	20	438	0.184	80	0.2	0.2	10.060	B
C-AB	42	10	676	0.062	42	0.1	0.1	5.674	A
C-A	229	57			229				
A-B	153	38			153				
A-C	175	44			175				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	35	9	552	0.064	35	0.1	0.1	6.966	A
B-A	80	20	438	0.184	80	0.2	0.2	10.072	B
C-AB	42	10	676	0.062	42	0.1	0.1	5.674	A
C-A	229	57			229				
A-B	153	38			153				
A-C	175	44			175				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	29	7	568	0.051	29	0.1	0.1	6.673	A
B-A	66	16	459	0.143	66	0.2	0.2	9.159	A
C-AB	34	9	695	0.049	34	0.1	0.1	5.452	A
C-A	187	47			187				
A-B	125	31			125				
A-C	143	36			143				

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	24	6	580	0.042	24	0.1	0.0	6.474	A
B-A	55	14	474	0.116	55	0.2	0.1	8.587	A
C-AB	29	7	708	0.040	29	0.1	0.0	5.297	A
C-A	157	39			157				
A-B	105	26			105				
A-C	120	30			120				

2028 Base + CD, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		3.57	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.57	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2028 Base + CD	PM	ONE HOUR	15:45	17:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - B184 Thaxted Road (N)		ONE HOUR	✓	413	100.000
B - Site Access		ONE HOUR	✓	232	100.000
C - B184 Thaxted Road (S)		ONE HOUR	✓	207	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - B184 Thaxted Road (N)	B - Site Access	C - B184 Thaxted Road (S)
From	A - B184 Thaxted Road (N)	0	204	209
	B - Site Access	155	0	77
	C - B184 Thaxted Road (S)	164	43	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
		A - B184 Thaxted Road (N)	B - Site Access	C - B184 Thaxted Road (S)
From	A - B184 Thaxted Road (N)	0	2	4
	B - Site Access	1	0	0
	C - B184 Thaxted Road (S)	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.17	8.63	0.2	A	71	106
B-A	0.40	14.04	0.7	B	142	213
C-AB	0.07	5.92	0.1	A	39	59
C-A					150	226
A-B					187	281
A-C					192	288

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	58	14	552	0.105	58	0.0	0.1	7.275	A
B-A	117	29	469	0.249	115	0.0	0.3	10.145	B
C-AB	32	8	701	0.046	32	0.0	0.0	5.377	A
C-A	123	31			123				
A-B	154	38			154				
A-C	157	39			157				

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	69	17	532	0.130	69	0.1	0.1	7.778	A
B-A	139	35	451	0.309	139	0.3	0.4	11.506	B
C-AB	39	10	682	0.057	39	0.0	0.1	5.593	A
C-A	147	37			147				
A-B	183	46			183				
A-C	188	47			188				

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	85	21	502	0.169	85	0.1	0.2	8.611	A
B-A	171	43	427	0.400	170	0.4	0.7	13.959	B
C-AB	47	12	656	0.072	47	0.1	0.1	5.918	A
C-A	181	45			181				
A-B	225	56			225				
A-C	230	58			230				

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	85	21	502	0.169	85	0.2	0.2	8.628	A
B-A	171	43	427	0.400	171	0.7	0.7	14.045	B
C-AB	47	12	656	0.072	47	0.1	0.1	5.918	A
C-A	181	45			181				
A-B	225	56			225				
A-C	230	58			230				

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	69	17	531	0.130	69	0.2	0.2	7.800	A
B-A	139	35	451	0.309	140	0.7	0.5	11.600	B
C-AB	39	10	682	0.057	39	0.1	0.1	5.596	A
C-A	147	37			147				
A-B	183	46			183				
A-C	188	47			188				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	58	14	551	0.105	58	0.2	0.1	7.304	A
B-A	117	29	469	0.249	117	0.5	0.3	10.247	B
C-AB	32	8	701	0.046	32	0.1	0.0	5.380	A
C-A	123	31			123				
A-B	154	38			154				
A-C	157	39			157				

2028 Base + CD + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.13	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.13	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2028 Base + CD + Dev	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - B184 Thaxted Road (N)		ONE HOUR	✓	305	100.000
B - Site Access		ONE HOUR	✓	129	100.000
C - B184 Thaxted Road (S)		ONE HOUR	✓	247	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - B184 Thaxted Road (N)	B - Site Access	C - B184 Thaxted Road (S)
From	A - B184 Thaxted Road (N)	0	146	159
	B - Site Access	94	0	35
	C - B184 Thaxted Road (S)	208	39	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
		A - B184 Thaxted Road (N)	B - Site Access	C - B184 Thaxted Road (S)
From	A - B184 Thaxted Road (N)	0	1	4
	B - Site Access	2	0	0
	C - B184 Thaxted Road (S)	4	3	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.07	7.20	0.1	A	32	48
B-A	0.23	10.55	0.3	B	86	129
C-AB	0.06	5.71	0.1	A	36	54
C-A					191	286
A-B					134	201
A-C					146	219

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	26	7	570	0.046	26	0.0	0.0	6.618	A
B-A	71	18	482	0.147	70	0.0	0.2	8.719	A
C-AB	29	7	707	0.042	29	0.0	0.0	5.313	A
C-A	157	39			157				
A-B	110	27			110				
A-C	120	30			120				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	31	8	557	0.056	31	0.0	0.1	6.850	A
B-A	85	21	466	0.181	84	0.2	0.2	9.414	A
C-AB	35	9	693	0.051	35	0.0	0.1	5.472	A
C-A	187	47			187				
A-B	131	33			131				
A-C	143	36			143				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	39	10	539	0.072	38	0.1	0.1	7.196	A
B-A	103	26	445	0.233	103	0.2	0.3	10.534	B
C-AB	43	11	674	0.064	43	0.1	0.1	5.705	A
C-A	229	57			229				
A-B	161	40			161				
A-C	175	44			175				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	39	10	539	0.072	39	0.1	0.1	7.198	A
B-A	103	26	445	0.233	103	0.3	0.3	10.553	B
C-AB	43	11	674	0.064	43	0.1	0.1	5.705	A
C-A	229	57			229				
A-B	161	40			161				
A-C	175	44			175				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	31	8	557	0.057	32	0.1	0.1	6.855	A
B-A	85	21	467	0.181	85	0.3	0.2	9.440	A
C-AB	35	9	693	0.051	35	0.1	0.1	5.473	A
C-A	187	47			187				
A-B	131	33			131				
A-C	143	36			143				

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	26	7	570	0.046	26	0.1	0.0	6.629	A
B-A	71	18	482	0.147	71	0.2	0.2	8.755	A
C-AB	29	7	707	0.042	29	0.1	0.0	5.317	A
C-A	157	39			157				
A-B	110	27			110				
A-C	120	30			120				

2028 Base + CD + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		3.77	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.77	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2028 Base + CD + Dev	PM	ONE HOUR	15:45	17:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - B184 Thaxted Road (N)		ONE HOUR	✓	431	100.000
B - Site Access		ONE HOUR	✓	242	100.000
C - B184 Thaxted Road (S)		ONE HOUR	✓	210	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - B184 Thaxted Road (N)	B - Site Access	C - B184 Thaxted Road (S)
From	A - B184 Thaxted Road (N)	0	222	209
	B - Site Access	164	0	78
	C - B184 Thaxted Road (S)	164	46	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
		A - B184 Thaxted Road (N)	B - Site Access	C - B184 Thaxted Road (S)
From	A - B184 Thaxted Road (N)	0	1	4
	B - Site Access	1	0	0
	C - B184 Thaxted Road (S)	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.17	8.82	0.2	A	72	107
B-A	0.42	14.72	0.7	B	150	226
C-AB	0.08	6.01	0.1	A	42	63
C-A					150	226
A-B					204	306
A-C					192	288

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	59	15	547	0.107	58	0.0	0.1	7.361	A
B-A	123	31	468	0.264	122	0.0	0.4	10.363	B
C-AB	35	9	698	0.050	34	0.0	0.1	5.426	A
C-A	123	31			123				
A-B	167	42			167				
A-C	157	39			157				

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	70	18	526	0.133	70	0.1	0.2	7.893	A
B-A	147	37	450	0.328	147	0.4	0.5	11.858	B
C-AB	41	10	678	0.061	41	0.1	0.1	5.656	A
C-A	147	37			147				
A-B	200	50			200				
A-C	188	47			188				

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	86	21	495	0.174	86	0.2	0.2	8.800	A
B-A	181	45	425	0.425	180	0.5	0.7	14.615	B
C-AB	51	13	650	0.078	51	0.1	0.1	6.005	A
C-A	181	45			181				
A-B	244	61			244				
A-C	230	58			230				

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	86	21	494	0.174	86	0.2	0.2	8.820	A
B-A	181	45	425	0.425	181	0.7	0.7	14.722	B
C-AB	51	13	650	0.078	51	0.1	0.1	6.005	A
C-A	181	45			181				
A-B	244	61			244				
A-C	230	58			230				

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	70	18	525	0.134	70	0.2	0.2	7.919	A
B-A	147	37	450	0.328	148	0.7	0.5	11.968	B
C-AB	41	10	678	0.061	41	0.1	0.1	5.660	A
C-A	147	37			147				
A-B	200	50			200				
A-C	188	47			188				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	59	15	546	0.108	59	0.2	0.1	7.389	A
B-A	123	31	468	0.264	124	0.5	0.4	10.478	B
C-AB	35	9	698	0.050	35	0.1	0.1	5.431	A
C-A	123	31			123				
A-B	167	42			167				
A-C	157	39			157				

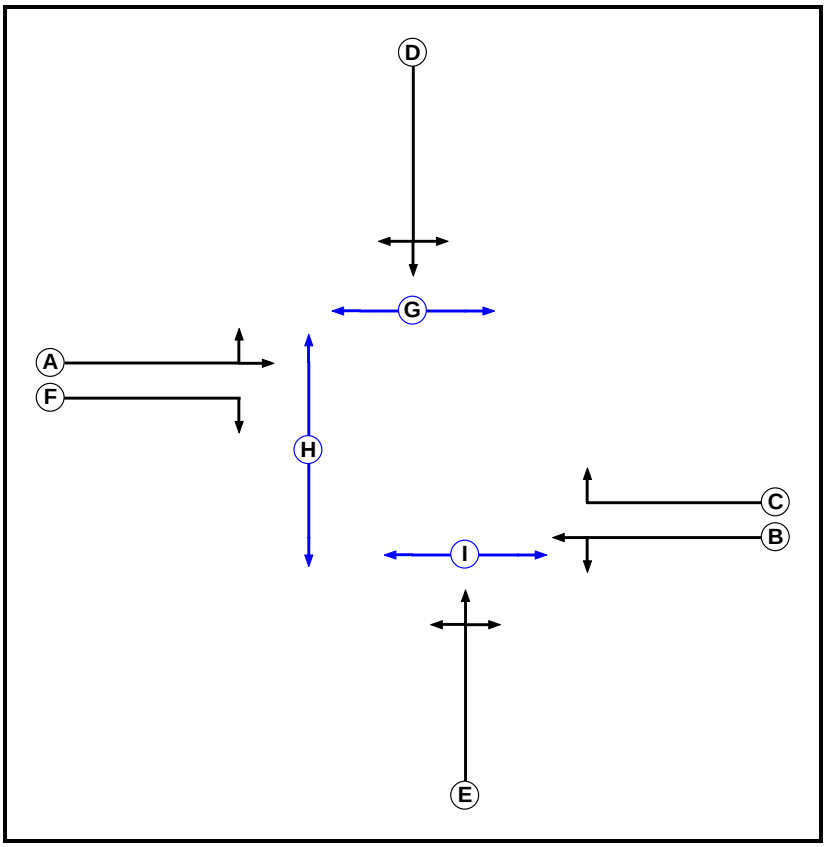
Appendix 11

MTP Results Summary

User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	23075 - B184 Thaxted Road-Cardamon Rd-Land West Signals (Staggered - Right Turn Overlappers) Rev A.lsg3x
Author:	
Company:	
Address:	

Phase Diagram



MTP Results Summary

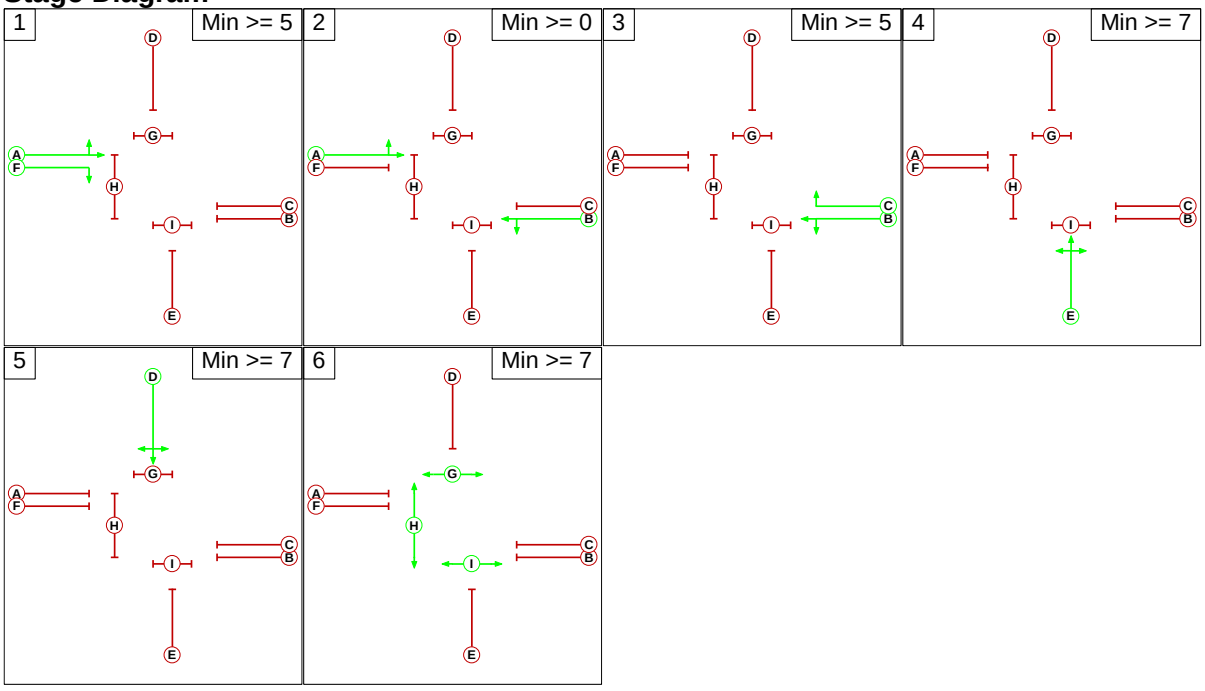
Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7
G	Pedestrian		7	7
H	Pedestrian		7	7
I	Pedestrian		7	7

Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I
A		-	9	9	9	-	9	7	-
B	-		-	10	9	9	-	12	8
C	8	-		8	7	-	9	-	-
D	6	7	6		7	7	5	9	8
E	8	6	8	8		6	8	9	5
F	-	9	-	9	8		-	5	9
G	13	-	13	13	13	-		-	-
H	11	11	-	11	11	11	-		-
I	-	15	-	15	15	15	-	-	

Stage Diagram



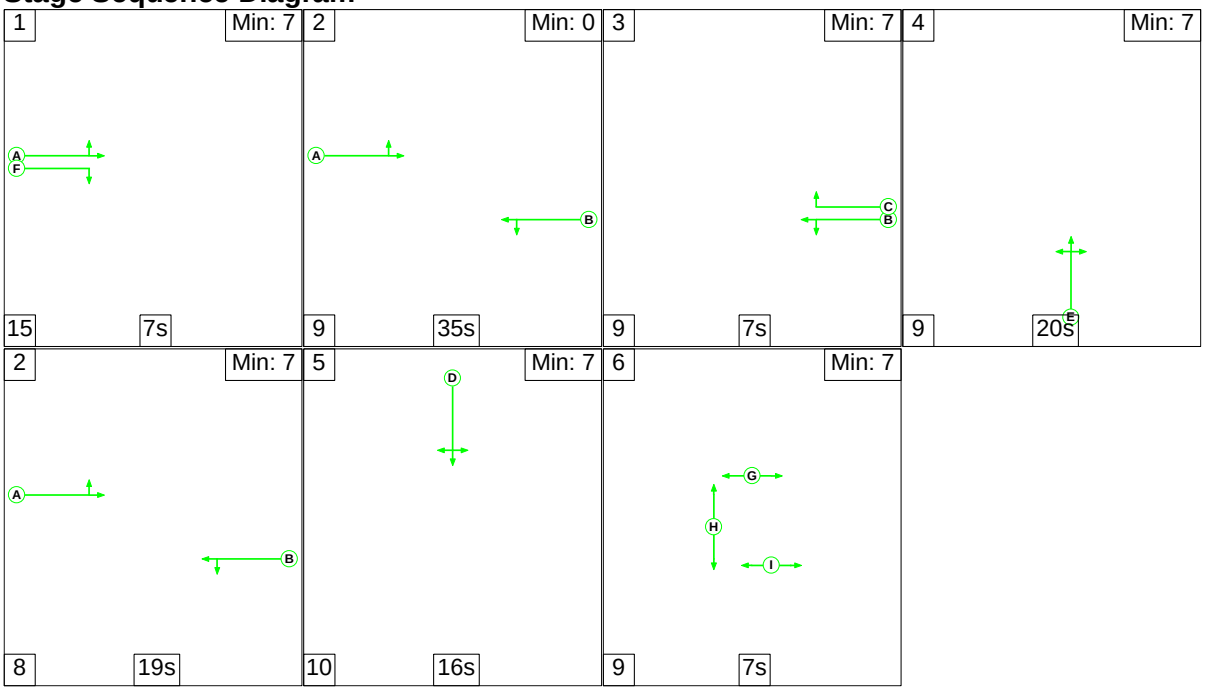
MTP Results Summary

Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Scenario 1: '2028 Base + CD AM' (FG1: '2028 Base + CD AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram



MTP Results Summary

Lane Input Data

Junction: Unnamed Junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (B184 (SE))	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Left	12.00
											Arm 6 Ahead	Inf
1/2 (B184 (SE))	U	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 7 Right	18.00
2/1 (Land West - Site Access)	U	E	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 6 Left	15.00
											Arm 7 Ahead	Inf
											Arm 8 Right	18.00
3/1 (B184 (NW))	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 7 Left	12.00
											Arm 8 Ahead	Inf
3/2 (B184 (NW))	U	F	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Right	18.00
4/1 (Cardamon Rd)	U	D	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Right	15.00
											Arm 8 Left	12.00
5/1 (Land West - Site Access)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (B184 (NW))	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Cardamon Rd)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (B184 (SE))	U		2	3	60.0	Inf	-	-	-	-	-	-

Give-Way Lane Input Data

Junction: Unnamed Junction
There are no Opposed Lanes in this Junction

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2028 Base + CD AM'	08:15	09:15	01:00	

MTP Results Summary

Traffic Flows, Actual

Actual Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	4	288	17	309
	B	13	0	80	0	93
	C	291	22	0	47	360
	D	9	0	65	0	74
	Tot.	313	26	433	64	836

MTP Results Summary

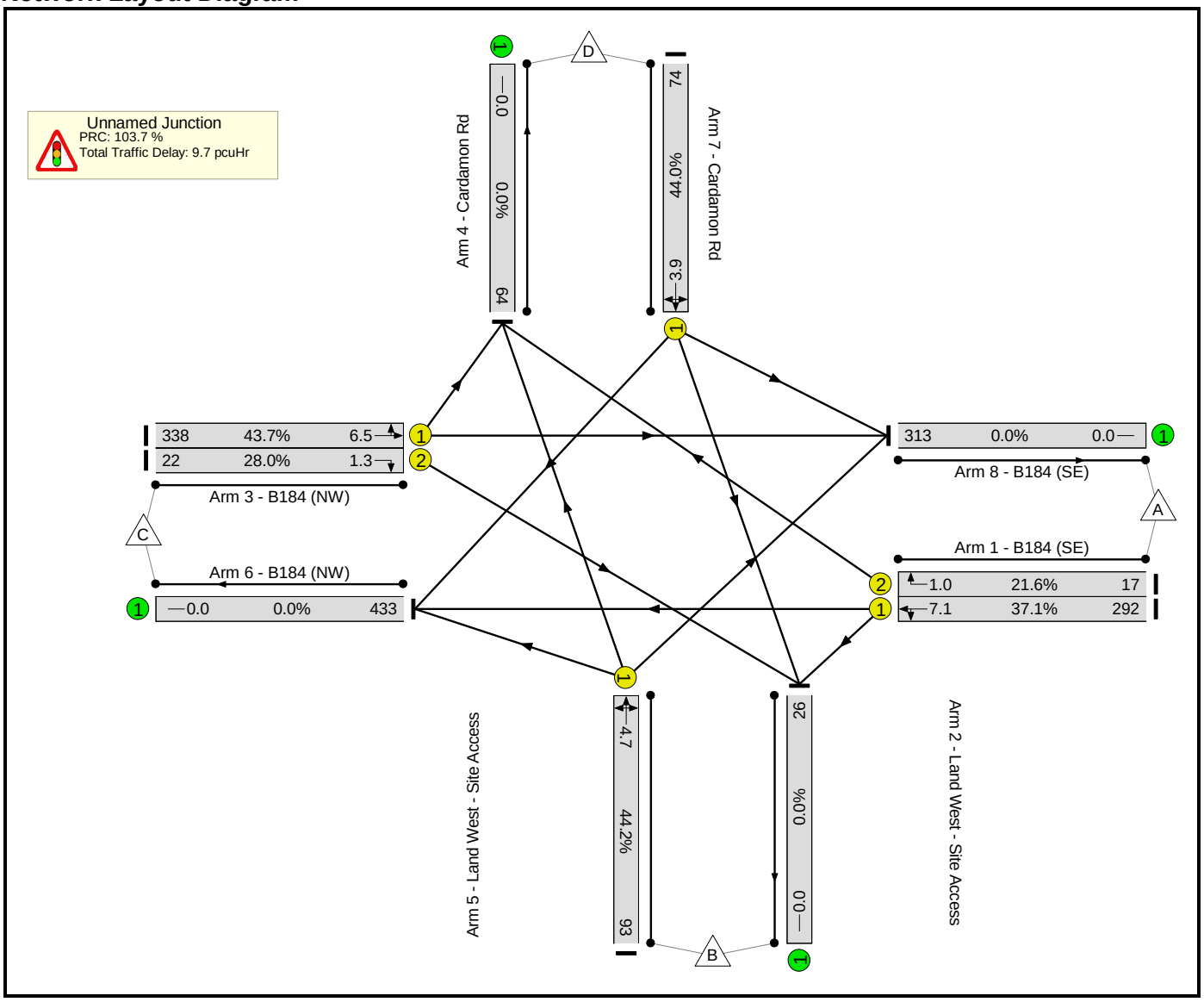
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**44.2%**	**0**	**0**	**0**	**9.7**	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	**44.2%**	**0**	**0**	**0**	**9.7**	-
1/1	B184 (SE) Left Ahead	U	B		2	72	-	292	1912	786	37.1%	-	-	-	2.0	7.1
1/2	B184 (SE) Right	U	C		1	7	-	17	1768	79	21.6%	-	-	-	0.5	1.0
2/1	Land West - Site Access Left Ahead Right	U	E		1	20	-	93	1804	210	44.2%	-	-	-	2.3	4.7
3/1	B184 (NW) Left Ahead	U	A		2	72	-	338	1882	774	43.7%	-	-	-	2.2	6.5
3/2	B184 (NW) Right	U	F		1	7	-	22	1768	79	28.0%	-	-	-	0.7	1.3
4/1	Cardamon Rd Ahead Right Left	U	D		1	16	-	74	1781	168	44.0%	-	-	-	2.0	3.9

C1 PRC for Signalled Lanes (%): 103.7 Total Delay for Signalled Lanes (pcuHr): 9.67 Cycle Time (s): 180
PRC Over All Lanes (%): 103.7 Total Delay Over All Lanes(pcuHr): 9.67

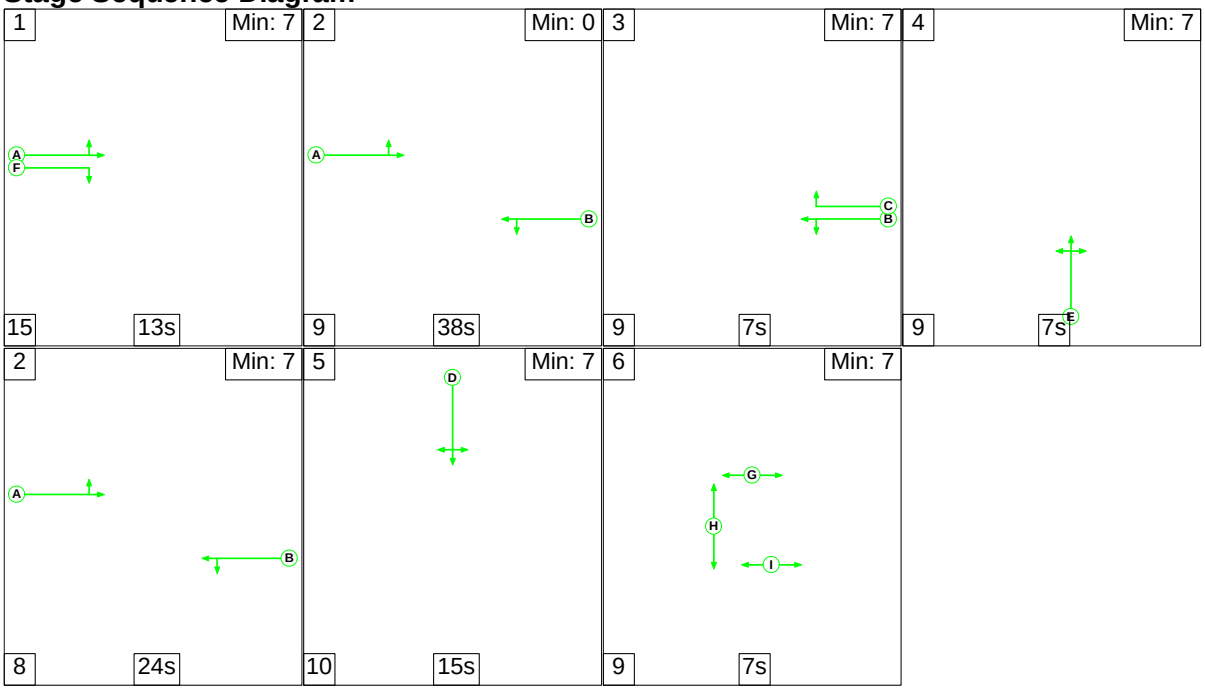
MTP Results Summary

Network Layout Diagram



Scenario 2: '2028 Base + CD PM' (FG2: '2028 Base + CD PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram



Lane Input Data

Junction: Unnamed Junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (B184 (SE))	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Left	12.00
											Arm 6 Ahead	Inf
1/2 (B184 (SE))	U	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 7 Right	18.00
2/1 (Land West - Site Access)	U	E	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 6 Left	15.00
											Arm 7 Ahead	Inf
											Arm 8 Right	18.00
3/1 (B184 (NW))	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 7 Left	12.00
											Arm 8 Ahead	Inf
3/2 (B184 (NW))	U	F	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Right	18.00
4/1 (Cardamon Rd)	U	D	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Right	15.00
											Arm 8 Left	12.00
5/1 (Land West - Site Access)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (B184 (NW))	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Cardamon Rd)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (B184 (SE))	U		2	3	60.0	Inf	-	-	-	-	-	-

Give-Way Lane Input Data

Junction: Unnamed Junction
There are no Opposed Lanes in this Junction

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
2: '2028 Base + CD PM'	16:00	17:00	01:00	

MTP Results Summary

Traffic Flows, Actual

Actual Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	9	323	6	338
	B	4	0	24	0	28
	C	416	56	0	64	536
	D	24	0	59	0	83
	Tot.	444	65	406	70	985

MTP Results Summary

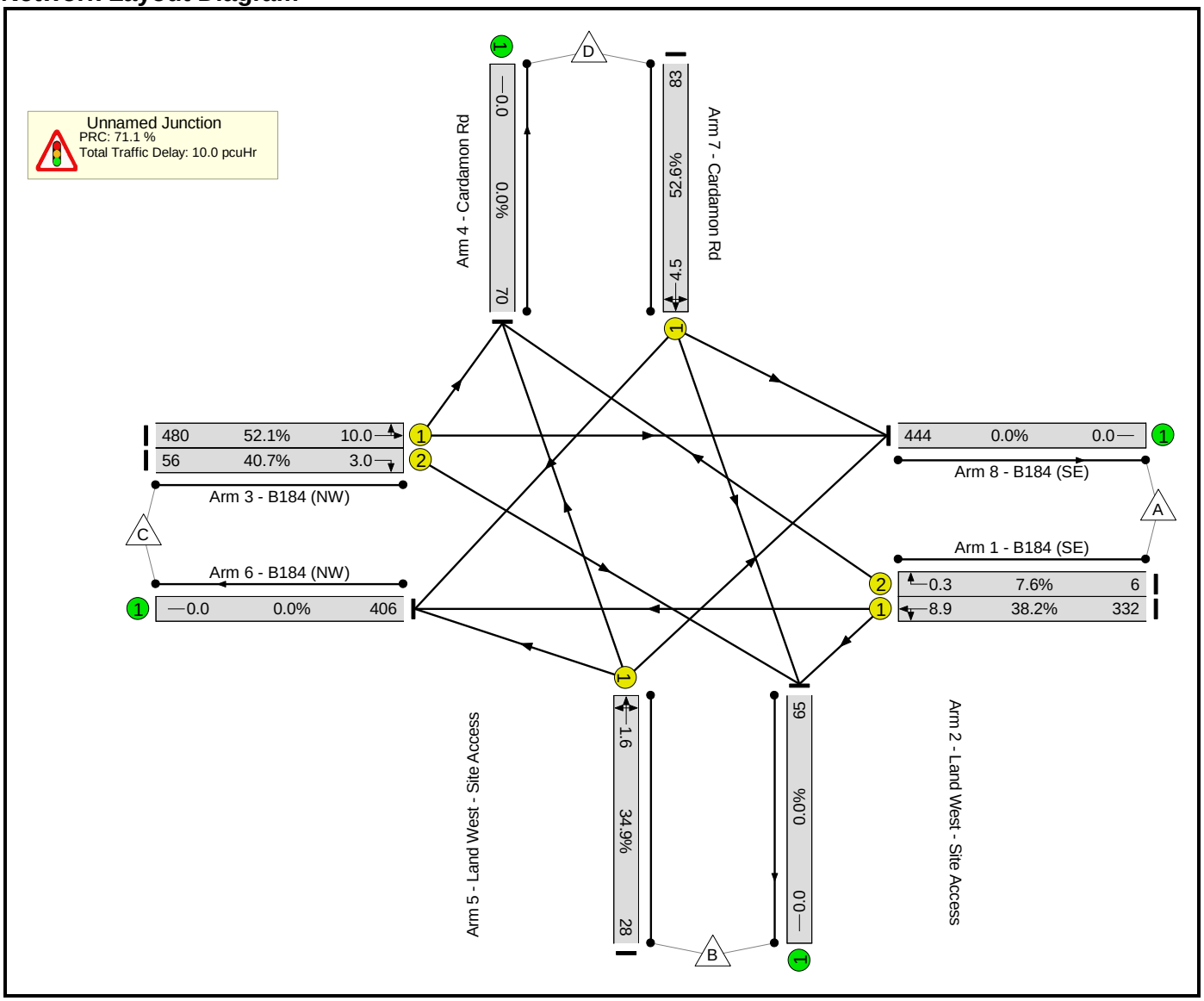
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**52.6%**	**0**	**0**	**0**	**10.0**	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	**52.6%**	**0**	**0**	**0**	**10.0**	-
1/1	B184 (SE) Left Ahead	U	B		2	80	-	332	1909	870	38.2%	-	-	-	2.3	8.9
1/2	B184 (SE) Right	U	C		1	7	-	6	1768	79	7.6%	-	-	-	0.2	0.3
2/1	Land West - Site Access Left Ahead Right	U	E		1	7	-	28	1804	80	34.9%	-	-	-	0.9	1.6
3/1	B184 (NW) Left Ahead	U	A		2	86	-	480	1884	921	52.1%	-	-	-	2.7	10.0
3/2	B184 (NW) Right	U	F		1	13	-	56	1768	138	40.7%	-	-	-	1.6	3.0
4/1	Cardamon Rd Ahead Right Left	U	D		1	15	-	83	1775	158	52.6%	-	-	-	2.4	4.5

C1 PRC for Signalled Lanes (%): 71.1 Total Delay for Signalled Lanes (pcuHr): 10.00 Cycle Time (s): 180
PRC Over All Lanes (%): 71.1 Total Delay Over All Lanes(pcuHr): 10.00

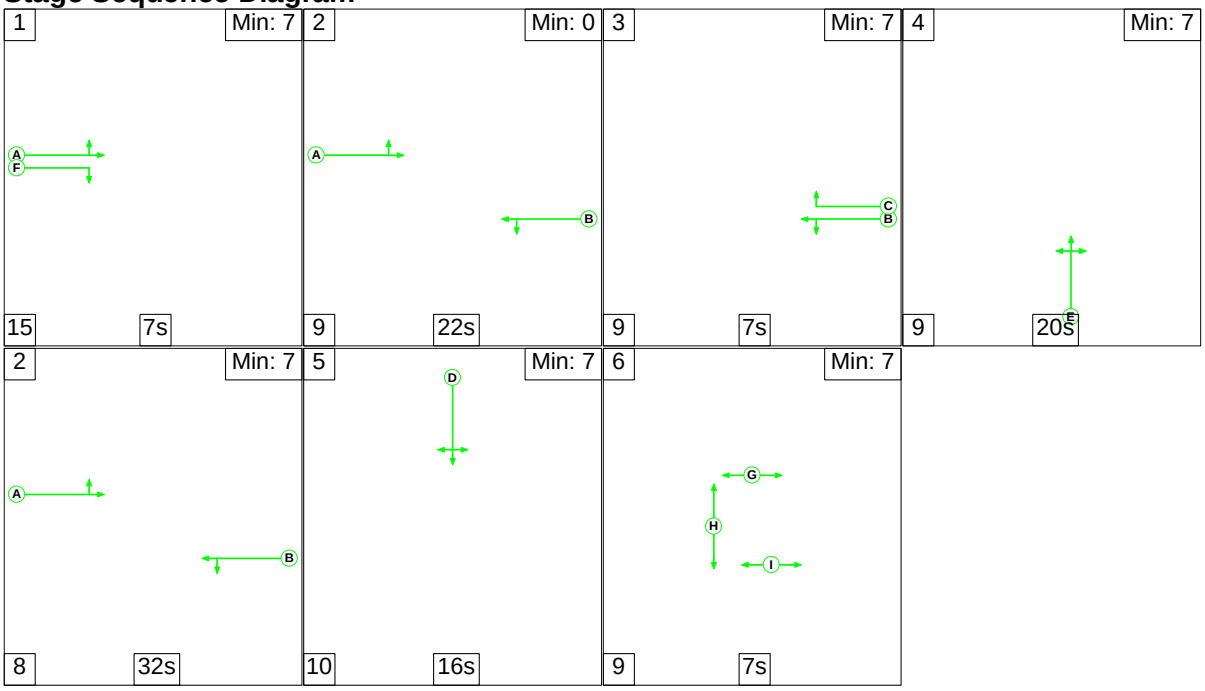
MTP Results Summary

Network Layout Diagram



Scenario 3: '2028 Base + CD + Dev AM' (FG3: '2028 Base + CD + Dev AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram



Lane Input Data

Junction: Unnamed Junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (B184 (SE))	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Left	12.00
											Arm 6 Ahead	Inf
1/2 (B184 (SE))	U	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 7 Right	18.00
2/1 (Land West - Site Access)	U	E	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 6 Left	15.00
											Arm 7 Ahead	Inf
											Arm 8 Right	18.00
3/1 (B184 (NW))	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 7 Left	12.00
											Arm 8 Ahead	Inf
3/2 (B184 (NW))	U	F	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Right	18.00
4/1 (Cardamon Rd)	U	D	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Right	15.00
											Arm 8 Left	12.00
5/1 (Land West - Site Access)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (B184 (NW))	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Cardamon Rd)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (B184 (SE))	U		2	3	60.0	Inf	-	-	-	-	-	-

Give-Way Lane Input Data

Junction: Unnamed Junction
There are no Opposed Lanes in this Junction

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
3: '2028 Base + CD + Dev AM'	08:15	09:15	01:00	

MTP Results Summary

Traffic Flows, Actual

Actual Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	4	309	17	330
	B	13	0	80	0	93
	C	297	22	0	47	366
	D	9	0	65	0	74
	Tot.	319	26	454	64	863

MTP Results Summary

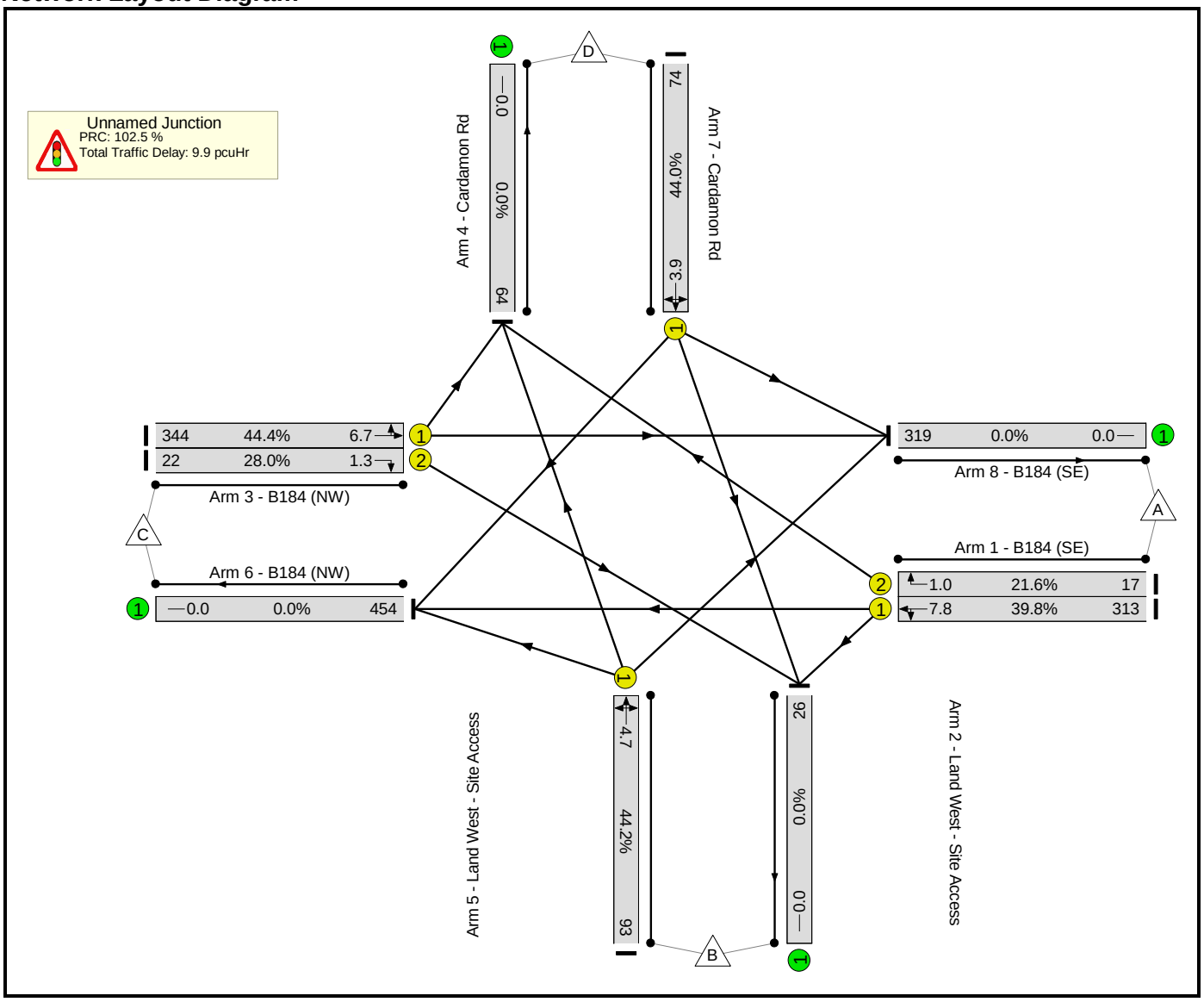
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**44.4%**	**0**	**0**	**0**	**9.9**	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	**44.4%**	**0**	**0**	**0**	**9.9**	-
1/1	B184 (SE) Left Ahead	U	B		2	72	-	313	1912	786	39.8%	-	-	-	2.2	7.8
1/2	B184 (SE) Right	U	C		1	7	-	17	1768	79	21.6%	-	-	-	0.5	1.0
2/1	Land West - Site Access Left Ahead Right	U	E		1	20	-	93	1804	210	44.2%	-	-	-	2.3	4.7
3/1	B184 (NW) Left Ahead	U	A		2	72	-	344	1883	774	44.4%	-	-	-	2.2	6.7
3/2	B184 (NW) Right	U	F		1	7	-	22	1768	79	28.0%	-	-	-	0.7	1.3
4/1	Cardamon Rd Ahead Right Left	U	D		1	16	-	74	1781	168	44.0%	-	-	-	2.0	3.9

C1 PRC for Signalled Lanes (%): 102.5 Total Delay for Signalled Lanes (pcuHr): 9.90 Cycle Time (s): 180
PRC Over All Lanes (%): 102.5 Total Delay Over All Lanes(pcuHr): 9.90

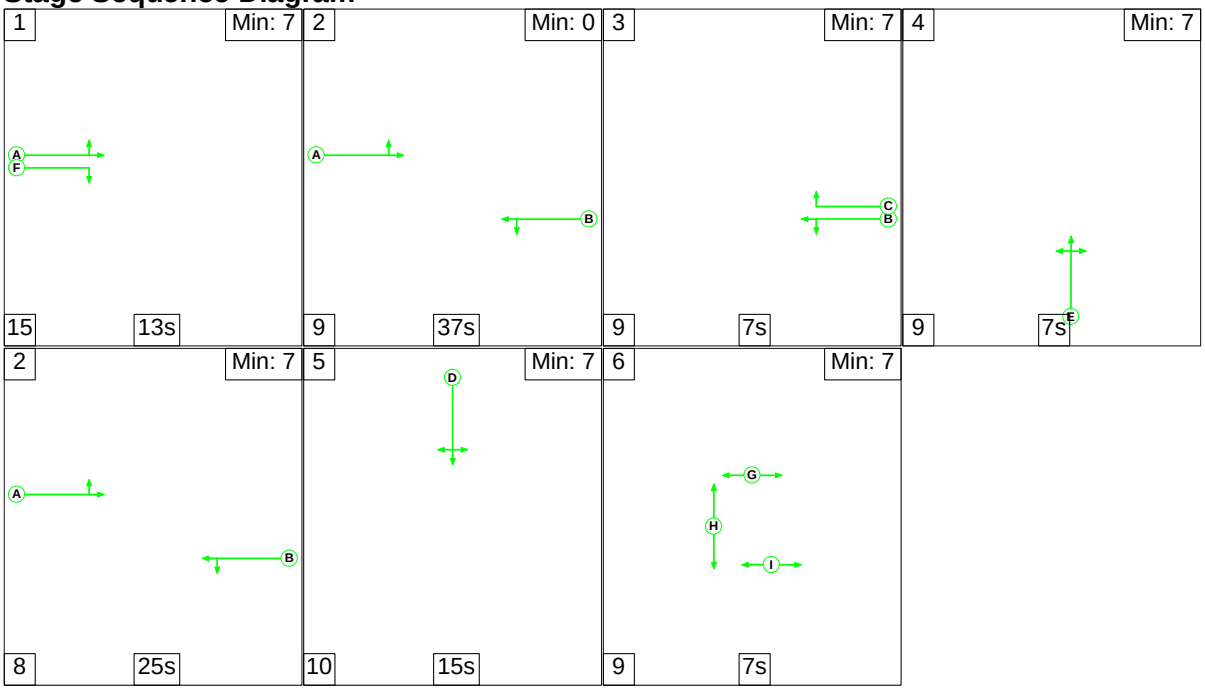
MTP Results Summary

Network Layout Diagram



Scenario 4: '2028 Base + CD + Dev PM' (FG4: '2028 Base + CD + Dev PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram



Lane Input Data

Junction: Unnamed Junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (B184 (SE))	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Left	12.00
											Arm 6 Ahead	Inf
1/2 (B184 (SE))	U	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 7 Right	18.00
2/1 (Land West - Site Access)	U	E	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 6 Left	15.00
											Arm 7 Ahead	Inf
											Arm 8 Right	18.00
3/1 (B184 (NW))	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 7 Left	12.00
											Arm 8 Ahead	Inf
3/2 (B184 (NW))	U	F	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Right	18.00
4/1 (Cardamon Rd)	U	D	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Right	15.00
											Arm 8 Left	12.00
5/1 (Land West - Site Access)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (B184 (NW))	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Cardamon Rd)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (B184 (SE))	U		2	3	60.0	Inf	-	-	-	-	-	-

Give-Way Lane Input Data

Junction: Unnamed Junction
There are no Opposed Lanes in this Junction

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
4: '2028 Base + CD + Dev PM'	16:00	17:00	01:00	

MTP Results Summary

Traffic Flows, Actual

Actual Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	9	331	6	346
	B	4	0	24	0	28
	C	434	56	0	64	554
	D	24	0	59	0	83
	Tot.	462	65	414	70	1011

MTP Results Summary

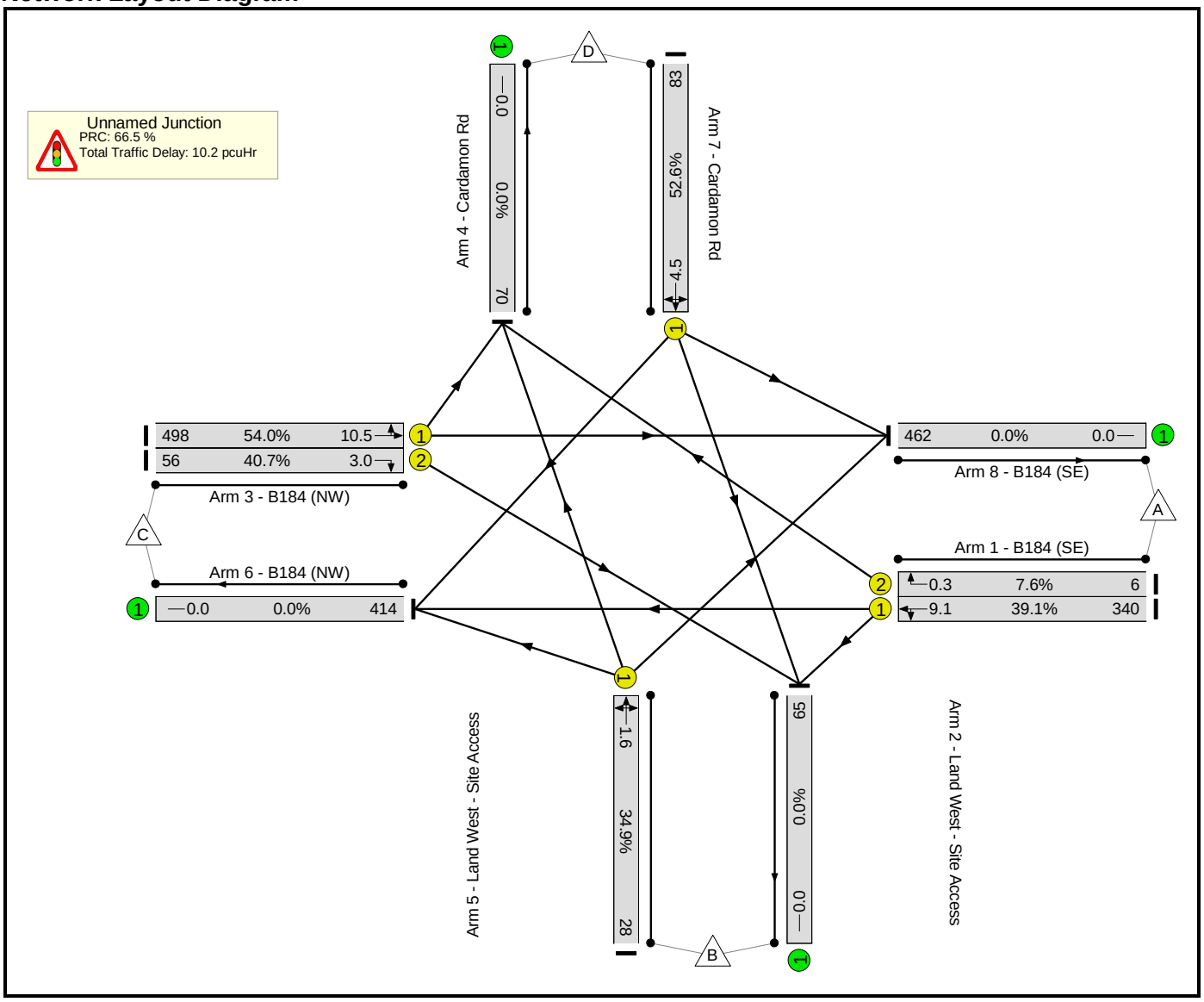
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**54.0%**	**0**	**0**	**0**	**10.2**	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	**54.0%**	**0**	**0**	**0**	**10.2**	-
1/1	B184 (SE) Left Ahead	U	B		2	80	-	340	1909	870	39.1%	-	-	-	2.4	9.1
1/2	B184 (SE) Right	U	C		1	7	-	6	1768	79	7.6%	-	-	-	0.2	0.3
2/1	Land West - Site Access Left Ahead Right	U	E		1	7	-	28	1804	80	34.9%	-	-	-	0.9	1.6
3/1	B184 (NW) Left Ahead	U	A		2	86	-	498	1885	922	54.0%	-	-	-	2.8	10.5
3/2	B184 (NW) Right	U	F		1	13	-	56	1768	138	40.7%	-	-	-	1.6	3.0
4/1	Cardamon Rd Ahead Right Left	U	D		1	15	-	83	1775	158	52.6%	-	-	-	2.4	4.5

C1 PRC for Signalled Lanes (%): 66.5 Total Delay for Signalled Lanes (pcuHr): 10.22 Cycle Time (s): 180
PRC Over All Lanes (%): 66.5 Total Delay Over All Lanes(pcuHr): 10.22

MTP Results Summary

Network Layout Diagram



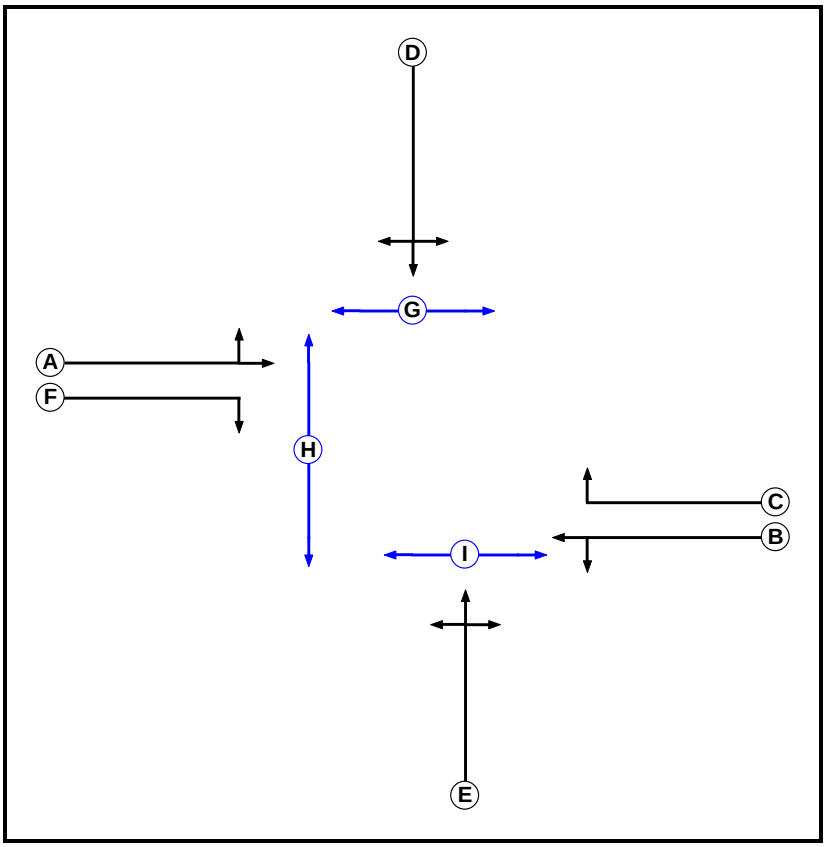
Appendix 12

MTP Results Summary

User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	23075 - B184 Thaxted Road-Cardamon Rd-Land West Signals (Staggered - Right Turn Lanes (Idv)) Rev A.lsg3x
Author:	
Company:	
Address:	

Phase Diagram



MTP Results Summary

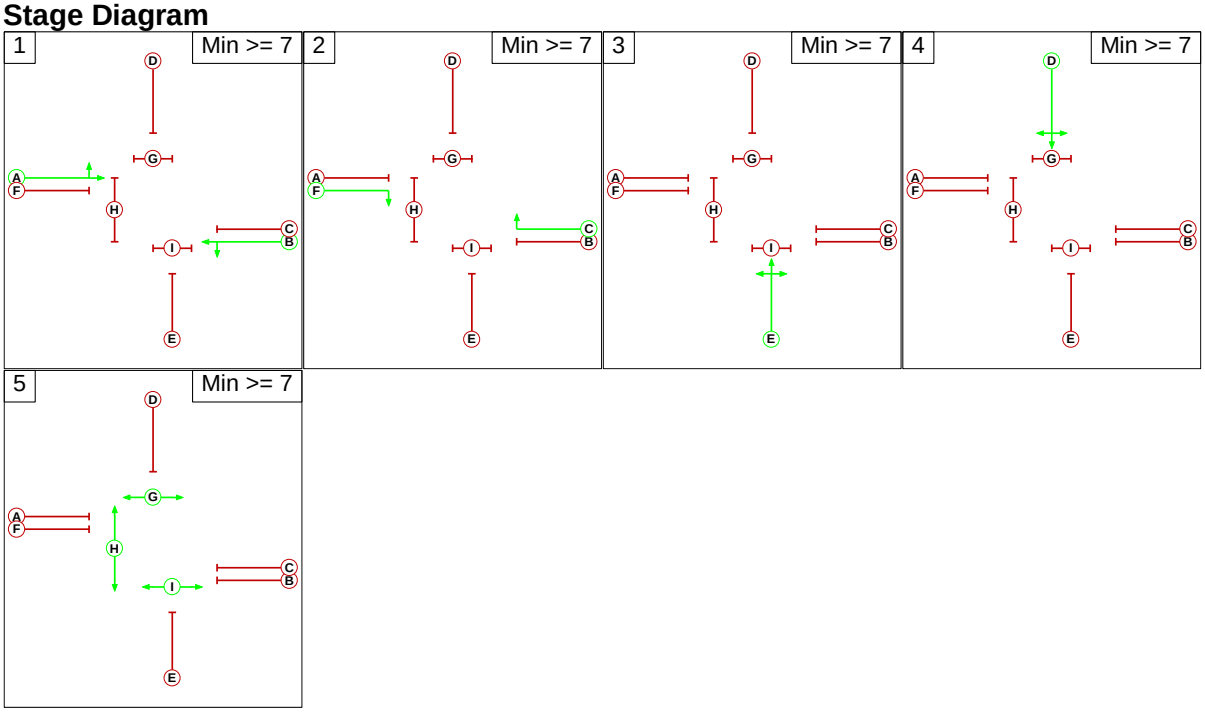
Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7
G	Pedestrian		7	7
H	Pedestrian		7	7
I	Pedestrian		7	7

Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I
A		-	9	9	9	-	9	7	-
B	-		-	10	9	9	-	12	8
C	8	-		8	7	-	9	-	-
D	6	7	6		7	7	5	9	8
E	8	6	8	8		6	8	9	5
F	-	9	-	9	8		-	5	9
G	13	-	13	13	13	-		-	-
H	11	11	-	11	11	11	-		-
I	-	15	-	15	15	15	-	-	

Stage Diagram



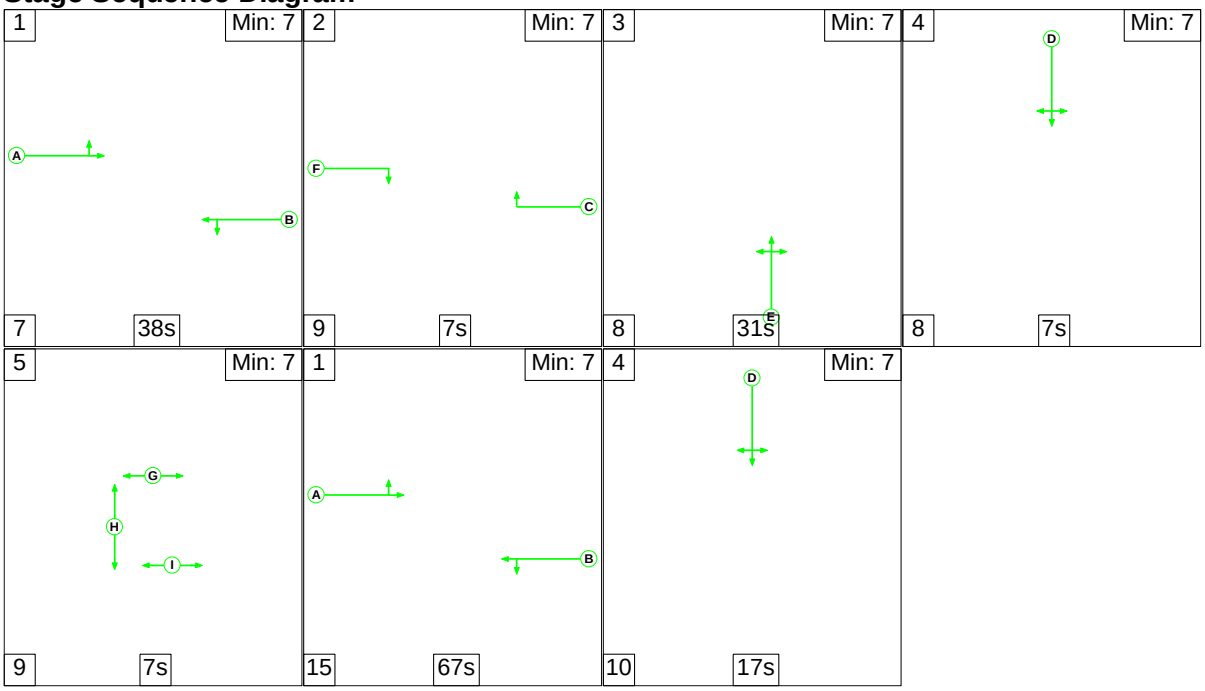
MTP Results Summary

Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Scenario 1: '2028 Base + CD AM' (FG1: '2028 Base + CD AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram



MTP Results Summary

Lane Input Data

Junction: Unnamed Junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (B184 (SE))	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Left	12.00
											Arm 6 Ahead	Inf
1/2 (B184 (SE))	U	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 7 Right	18.00
2/1 (Land West - Site Access)	U	E	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 6 Left	15.00
											Arm 7 Ahead	Inf
											Arm 8 Right	18.00
3/1 (B184 (NW))	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 7 Left	12.00
											Arm 8 Ahead	Inf
3/2 (B184 (NW))	U	F	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Right	18.00
4/1 (Cardamon Road)	U	D	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Right	15.00
											Arm 8 Left	12.00
5/1 (Land West - Site Access)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (B184 (NW))	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Cardamon Road)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (B184 (SE))	U		2	3	60.0	Inf	-	-	-	-	-	-

Give-Way Lane Input Data

Junction: Unnamed Junction
There are no Opposed Lanes in this Junction

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2028 Base + CD AM'	08:15	09:15	01:00	

MTP Results Summary

Traffic Flows, Actual

Actual Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	4	288	17	309
	B	13	0	80	0	93
	C	291	22	0	47	360
	D	9	0	65	0	74
	Tot.	313	26	433	64	836

MTP Results Summary

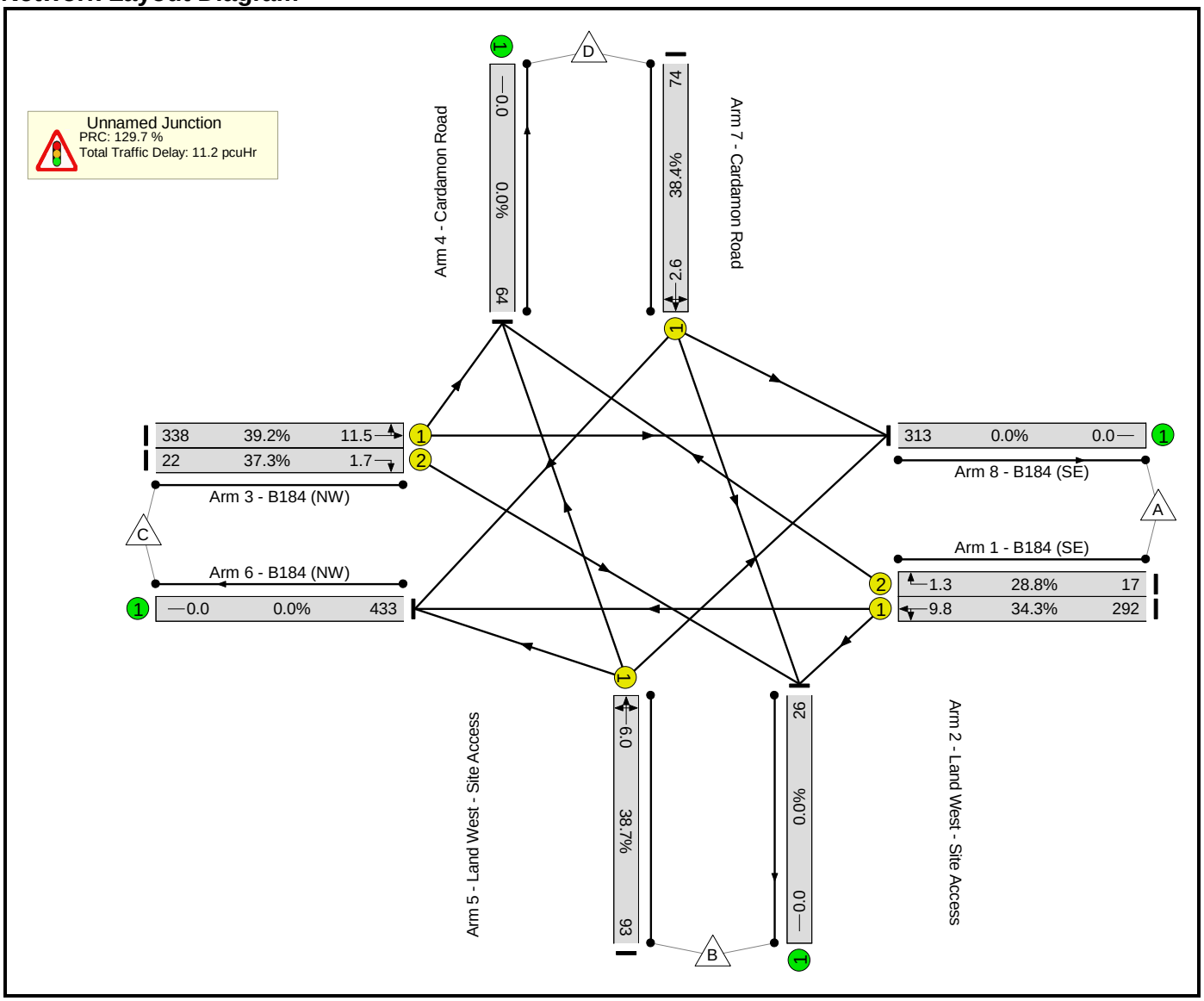
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**39.2%**	**0**	**0**	**0**	**11.2**	**-**
Unnamed Junction	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**39.2%**	**0**	**0**	**0**	**11.2**	**-**
1/1	B184 (SE) Left Ahead	U	B		2	105	-	292	1912	852	34.3%	-	-	-	2.5	9.8
1/2	B184 (SE) Right	U	C		1	7	-	17	1768	59	28.8%	-	-	-	0.7	1.3
2/1	Land West - Site Access Left Ahead Right	U	E		1	31	-	93	1804	241	38.7%	-	-	-	2.8	6.0
3/1	B184 (NW) Left Ahead	U	A		2	108	-	338	1882	863	39.2%	-	-	-	2.9	11.5
3/2	B184 (NW) Right	U	F		1	7	-	22	1768	59	37.3%	-	-	-	1.0	1.7
4/1	Cardamon Road Ahead Right Left	U	D		2	24	-	74	1781	193	38.4%	-	-	-	1.3	2.6

C1 PRC for Signalled Lanes (%): 129.7 Total Delay for Signalled Lanes (pcuHr): 11.15 Cycle Time (s): 240
PRC Over All Lanes (%): 129.7 Total Delay Over All Lanes(pcuHr): 11.15

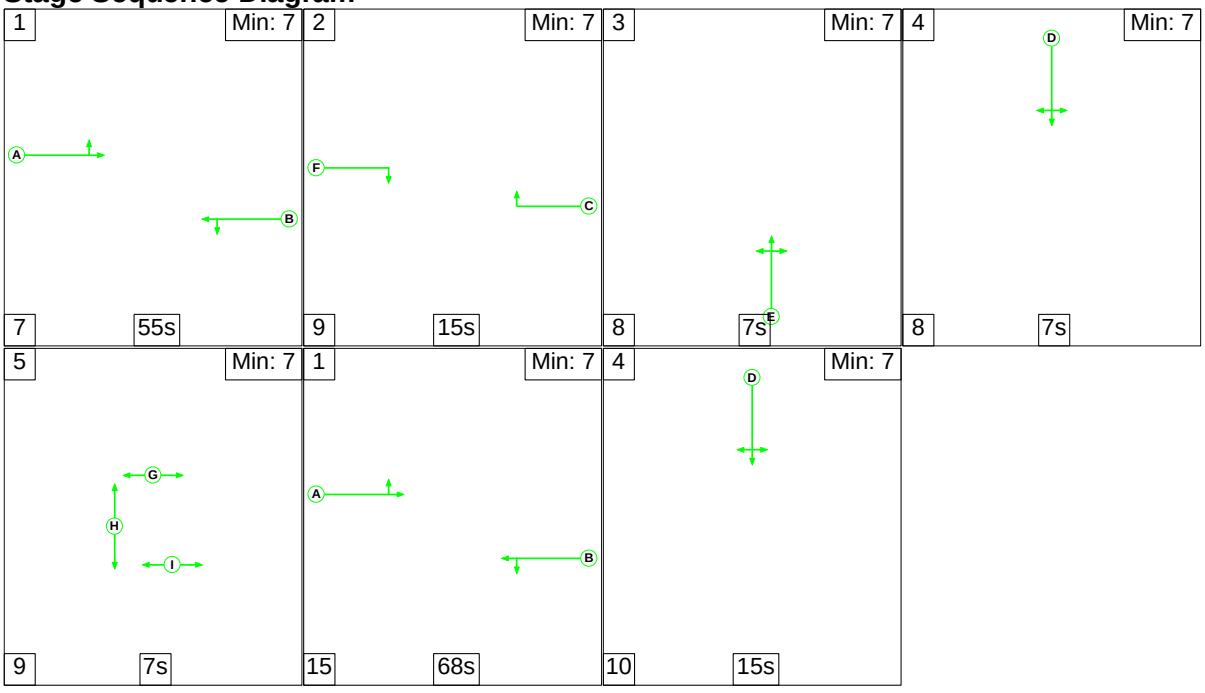
MTP Results Summary

Network Layout Diagram



Scenario 2: '2028 Base + CD PM' (FG2: '2028 Base + CD AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram



Lane Input Data

Junction: Unnamed Junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (B184 (SE))	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Left	12.00
											Arm 6 Ahead	Inf
1/2 (B184 (SE))	U	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 7 Right	18.00
2/1 (Land West - Site Access)	U	E	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 6 Left	15.00
											Arm 7 Ahead	Inf
											Arm 8 Right	18.00
3/1 (B184 (NW))	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 7 Left	12.00
											Arm 8 Ahead	Inf
3/2 (B184 (NW))	U	F	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Right	18.00
4/1 (Cardamon Road)	U	D	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Right	15.00
											Arm 8 Left	12.00
5/1 (Land West - Site Access)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (B184 (NW))	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Cardamon Road)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (B184 (SE))	U		2	3	60.0	Inf	-	-	-	-	-	-

Give-Way Lane Input Data

Junction: Unnamed Junction
There are no Opposed Lanes in this Junction

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
2: '2028 Base + CD AM'	16:00	17:00	01:00	

MTP Results Summary

Traffic Flows, Actual

Actual Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	9	323	6	338
	B	4	0	24	0	28
	C	416	56	0	64	536
	D	24	0	59	0	83
	Tot.	444	65	406	70	985

MTP Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**47.8%**	**0**	**0**	**0**	**10.7**	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	**47.8%**	**0**	**0**	**0**	**10.7**	-
1/1	B184 (SE) Left Ahead	U	B		2	123	-	332	1909	994	33.4%	-	-	-	2.1	9.6
1/2	B184 (SE) Right	U	C		1	15	-	6	1768	118	5.1%	-	-	-	0.2	0.4
2/1	Land West - Site Access Left Ahead Right	U	E		1	7	-	28	1804	60	46.6%	-	-	-	1.3	2.3
3/1	B184 (NW) Left Ahead	U	A		2	126	-	480	1884	1005	47.8%	-	-	-	3.3	15.1
3/2	B184 (NW) Right	U	F		1	15	-	56	1768	118	47.5%	-	-	-	2.1	4.0
4/1	Cardamon Road Ahead Right Left	U	D		2	22	-	83	1775	178	46.8%	-	-	-	1.6	3.0

C1

PRC for Signalled Lanes (%): 88.4

PRC Over All Lanes (%): 88.4

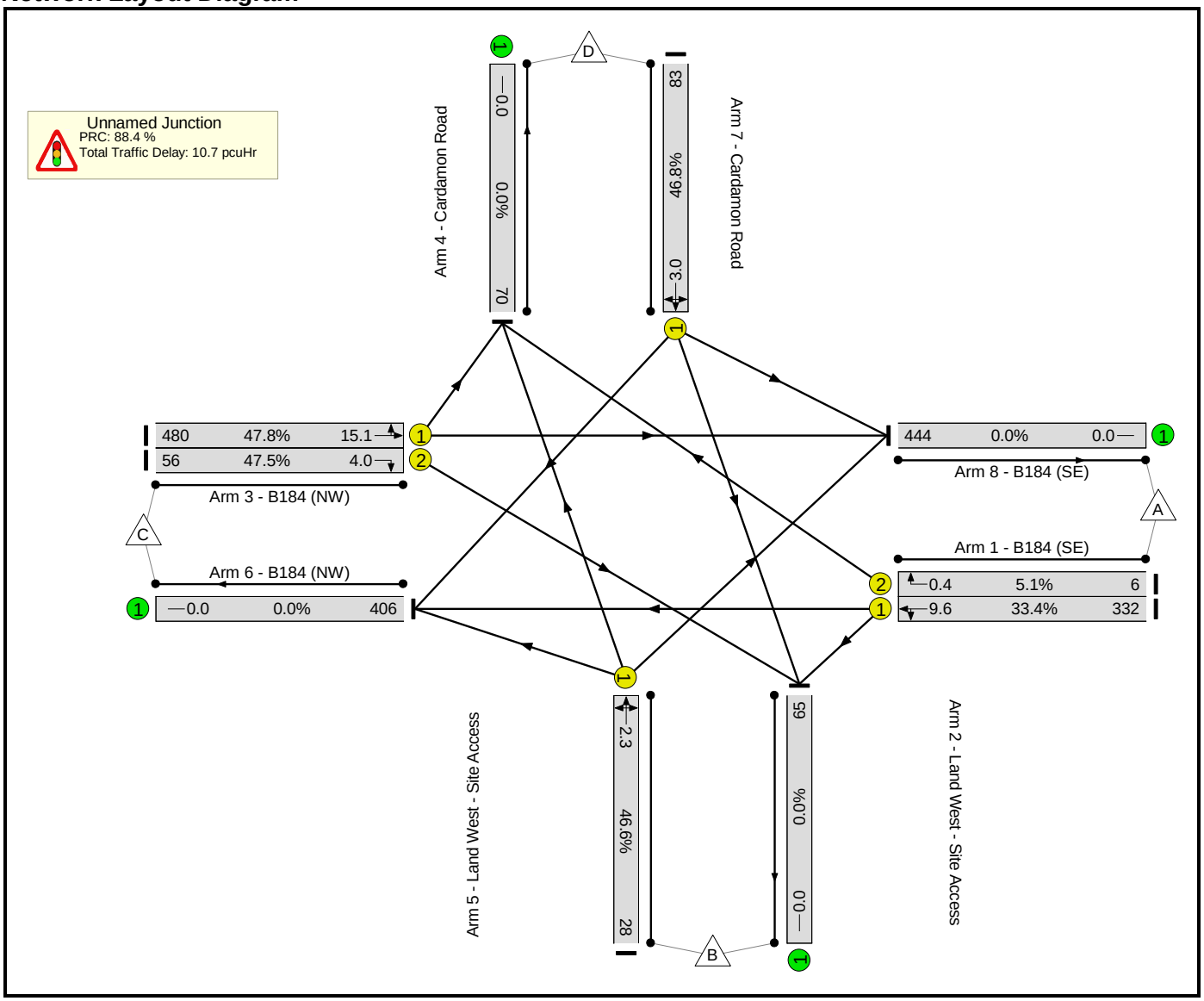
Total Delay for Signalled Lanes (pcuHr): 10.66

Total Delay Over All Lanes(pcuHr): 10.66

Cycle Time (s): 240

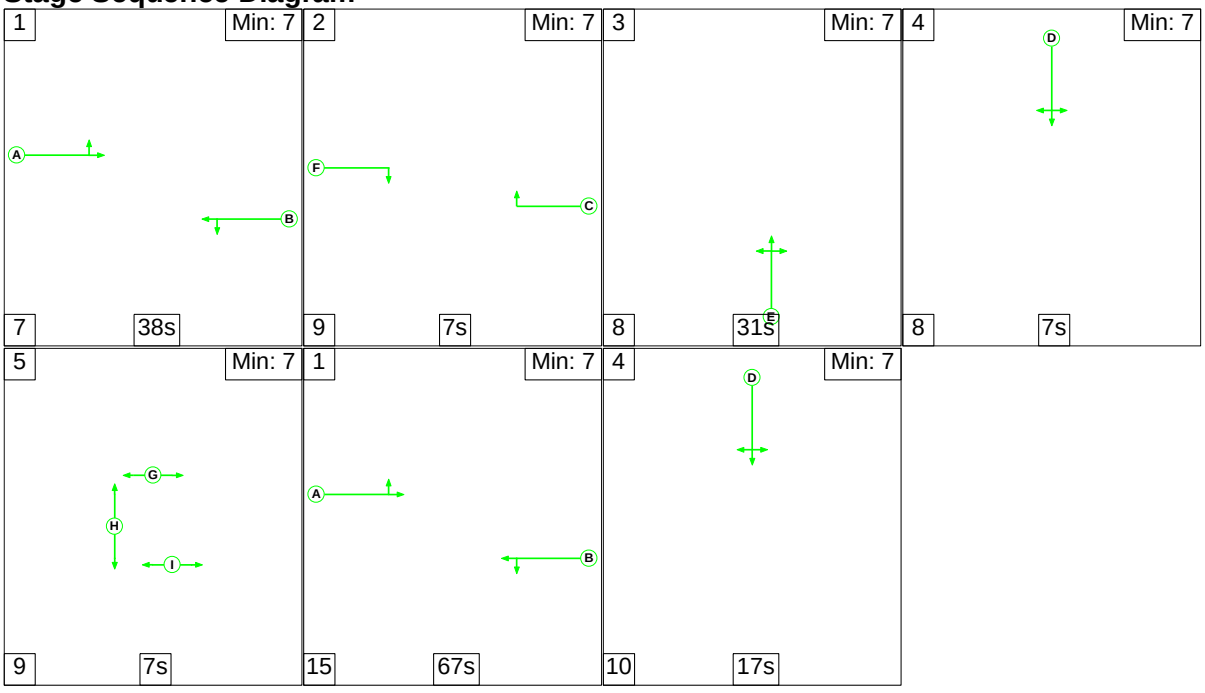
MTP Results Summary

Network Layout Diagram



Scenario 3: '2028 Base + CD + Dev AM' (FG3: '2028 Base + CD + Dev AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram



Lane Input Data

Junction: Unnamed Junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (B184 (SE))	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Left	12.00
											Arm 6 Ahead	Inf
1/2 (B184 (SE))	U	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 7 Right	18.00
2/1 (Land West - Site Access)	U	E	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 6 Left	15.00
											Arm 7 Ahead	Inf
											Arm 8 Right	18.00
3/1 (B184 (NW))	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 7 Left	12.00
											Arm 8 Ahead	Inf
3/2 (B184 (NW))	U	F	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Right	18.00
4/1 (Cardamon Road)	U	D	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Right	15.00
											Arm 8 Left	12.00
5/1 (Land West - Site Access)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (B184 (NW))	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Cardamon Road)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (B184 (SE))	U		2	3	60.0	Inf	-	-	-	-	-	-

Give-Way Lane Input Data

Junction: Unnamed Junction
There are no Opposed Lanes in this Junction

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
3: '2028 Base + CD + Dev AM'	08:15	09:15	01:00	

MTP Results Summary

Traffic Flows, Actual

Actual Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	4	309	17	330
	B	13	0	80	0	93
	C	297	22	0	47	366
	D	9	0	65	0	74
	Tot.	319	26	454	64	863

MTP Results Summary

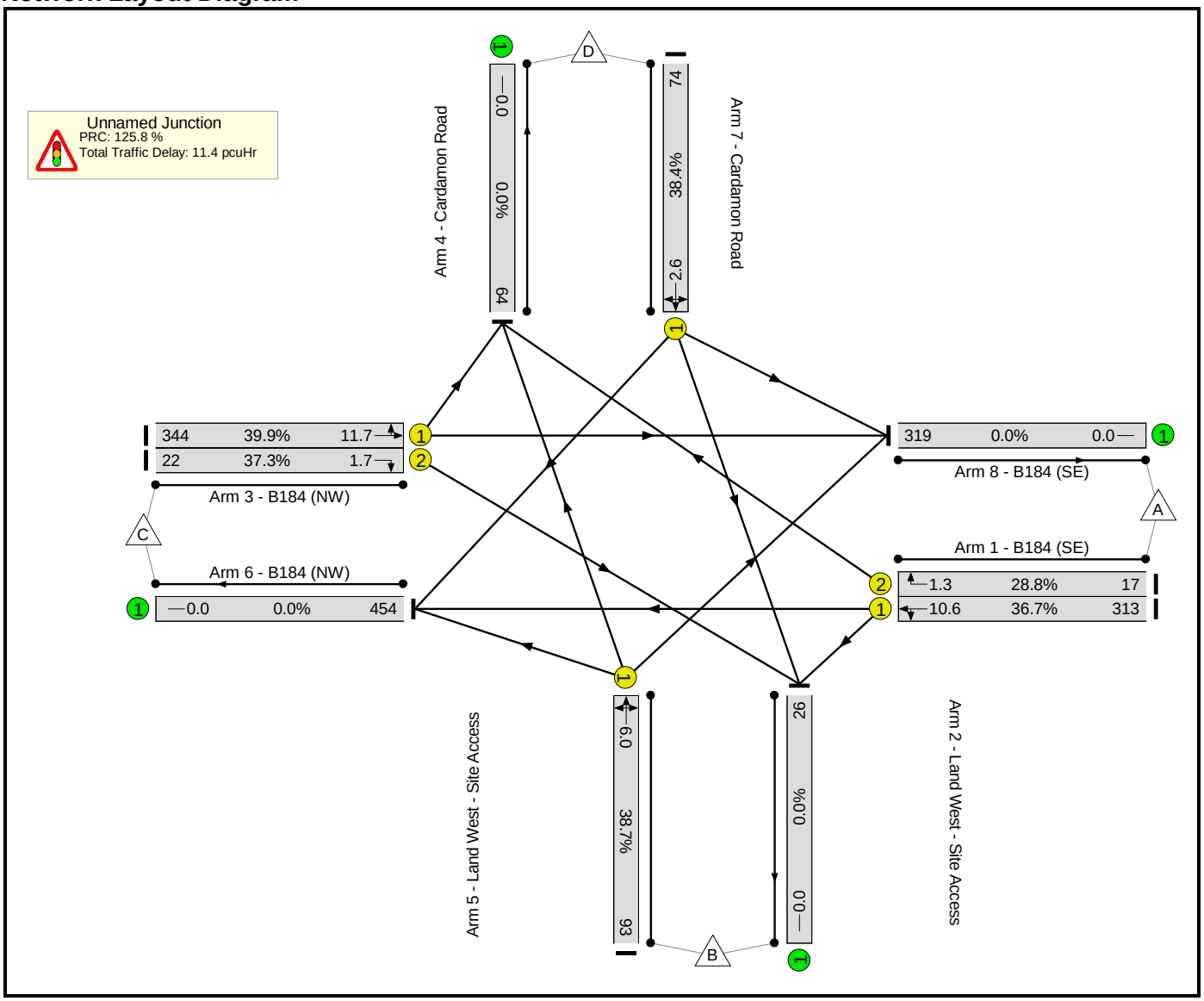
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**39.9%**	**0**	**0**	**0**	**11.4**	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	**39.9%**	**0**	**0**	**0**	**11.4**	-
1/1	B184 (SE) Left Ahead	U	B		2	105	-	313	1912	852	36.7%	-	-	-	2.7	10.6
1/2	B184 (SE) Right	U	C		1	7	-	17	1768	59	28.8%	-	-	-	0.7	1.3
2/1	Land West - Site Access Left Ahead Right	U	E		1	31	-	93	1804	241	38.7%	-	-	-	2.8	6.0
3/1	B184 (NW) Left Ahead	U	A		2	108	-	344	1883	863	39.9%	-	-	-	2.9	11.7
3/2	B184 (NW) Right	U	F		1	7	-	22	1768	59	37.3%	-	-	-	1.0	1.7
4/1	Cardamon Road Ahead Right Left	U	D		2	24	-	74	1781	193	38.4%	-	-	-	1.3	2.6

C1 PRC for Signalled Lanes (%): 125.8 Total Delay for Signalled Lanes (pcuHr): 11.44 Cycle Time (s): 240
PRC Over All Lanes (%): 125.8 Total Delay Over All Lanes(pcuHr): 11.44

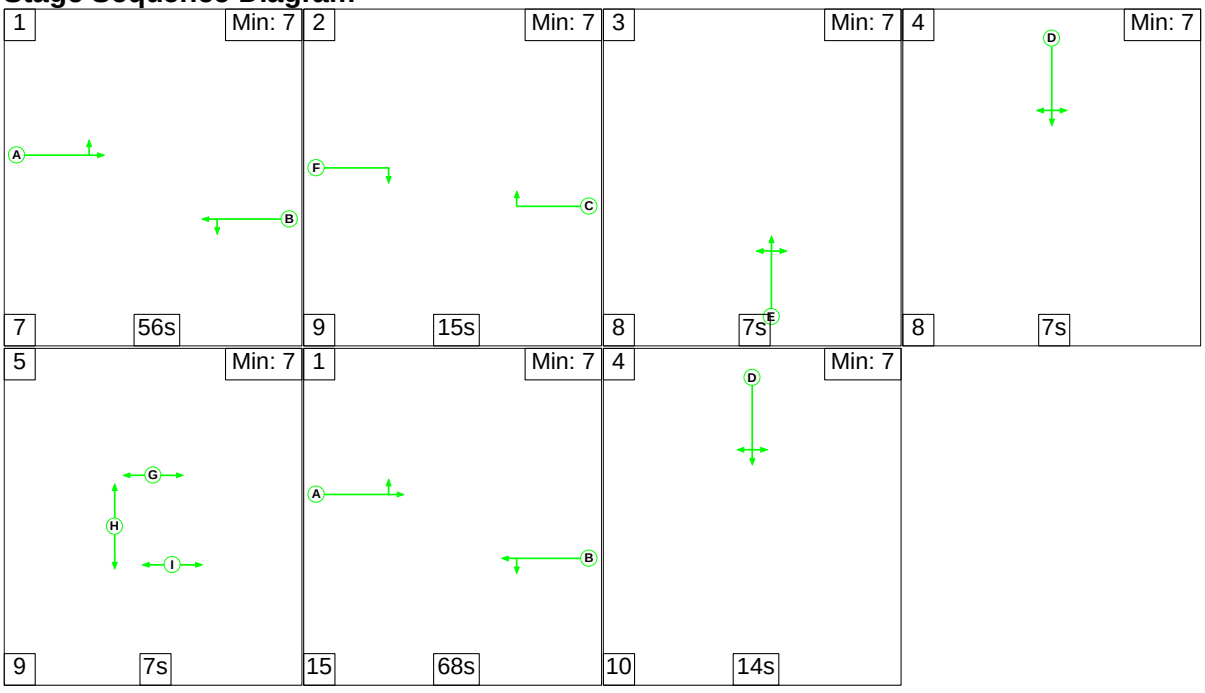
MTP Results Summary

Network Layout Diagram



Scenario 4: '2028 Base + CD + Dev PM' (FG4: '2028 Base + CD + Dev PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram



Lane Input Data

Junction: Unnamed Junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (B184 (SE))	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Left	12.00
											Arm 6 Ahead	Inf
1/2 (B184 (SE))	U	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 7 Right	18.00
2/1 (Land West - Site Access)	U	E	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 6 Left	15.00
											Arm 7 Ahead	Inf
											Arm 8 Right	18.00
3/1 (B184 (NW))	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 7 Left	12.00
											Arm 8 Ahead	Inf
3/2 (B184 (NW))	U	F	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Right	18.00
4/1 (Cardamon Road)	U	D	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Right	15.00
											Arm 8 Left	12.00
5/1 (Land West - Site Access)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (B184 (NW))	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Cardamon Road)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (B184 (SE))	U		2	3	60.0	Inf	-	-	-	-	-	-

Give-Way Lane Input Data

Junction: Unnamed Junction
There are no Opposed Lanes in this Junction

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
4: '2028 Base + CD + Dev PM'	16:00	17:00	01:00	

MTP Results Summary

Traffic Flows, Actual

Actual Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	9	331	6	346
	B	4	0	24	0	28
	C	434	56	0	64	554
	D	24	0	59	0	83
	Tot.	462	65	414	70	1011

MTP Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**49.2%**	**0**	**0**	**0**	**10.9**	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	**49.2%**	**0**	**0**	**0**	**10.9**	-
1/1	B184 (SE) Left Ahead	U	B		2	124	-	340	1909	1002	33.9%	-	-	-	2.2	9.9
1/2	B184 (SE) Right	U	C		1	15	-	6	1768	118	5.1%	-	-	-	0.2	0.4
2/1	Land West - Site Access Left Ahead Right	U	E		1	7	-	28	1804	60	46.6%	-	-	-	1.3	2.3
3/1	B184 (NW) Left Ahead	U	A		2	127	-	498	1885	1013	49.2%	-	-	-	3.4	15.8
3/2	B184 (NW) Right	U	F		1	15	-	56	1768	118	47.5%	-	-	-	2.1	4.0
4/1	Cardamon Road Ahead Right Left	U	D		2	21	-	83	1775	170	48.8%	-	-	-	1.7	3.1

C1

PRC for Signalled Lanes (%): 83.1

PRC Over All Lanes (%): 83.1

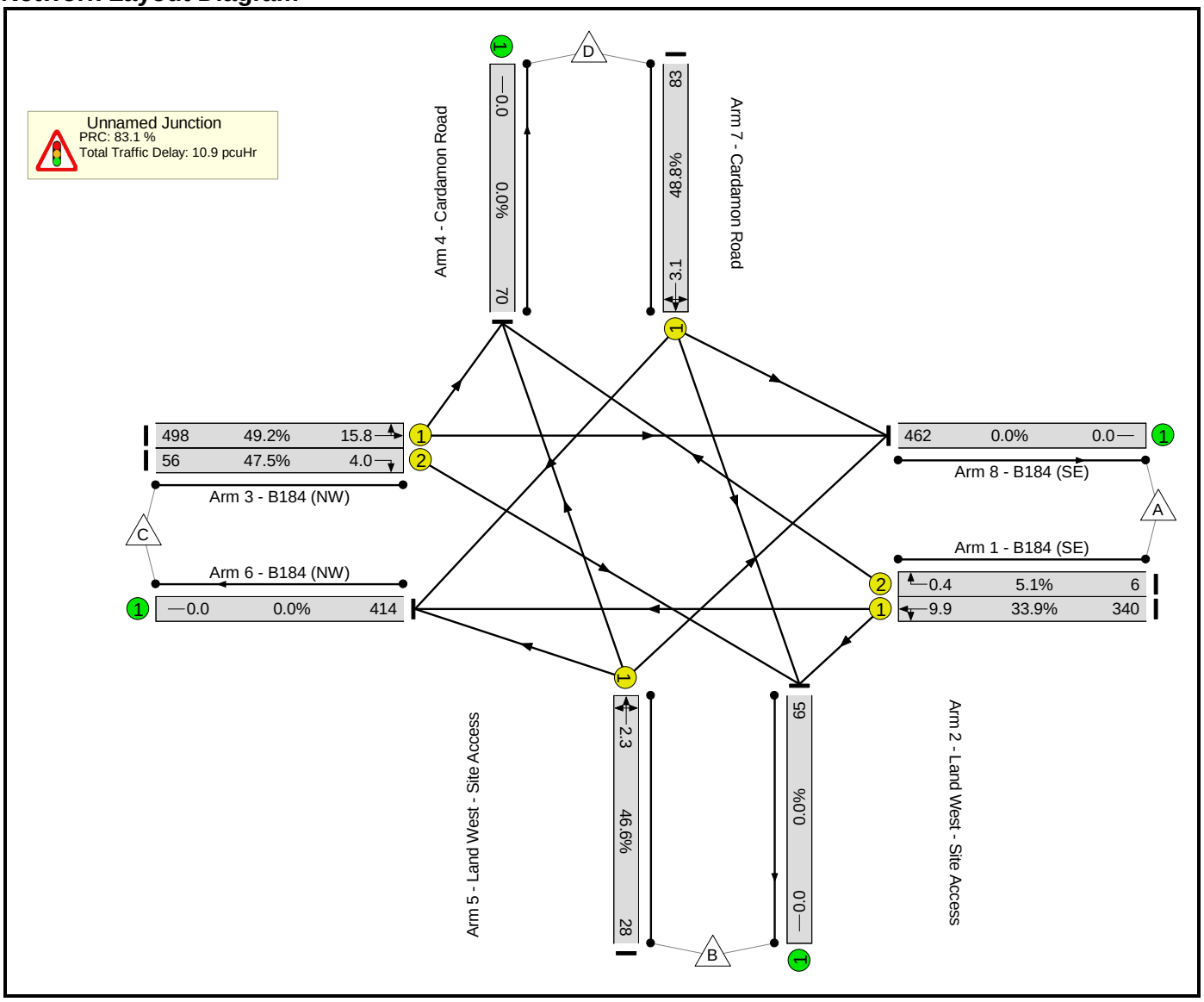
Total Delay for Signalled Lanes (pcuHr): 10.90

Total Delay Over All Lanes(pcuHr): 10.90

Cycle Time (s): 240

MTP Results Summary

Network Layout Diagram



Appendix 13

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.1.0.1820

Filename: 23075 - B184-Peaslands Rd Mini Rdbt Rev A.j10
Path: P:\23 Jobs\075 Saffron Walden Site 3 (Land NE Thaxted Rd)\Technical Assessments\Modelling
Report generation date: 29/11/2023 13:00:23

Summary of junction performance

	AM					PM				
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)
	2022 Base									
1 - B184 Thaxted Road (N)	0.6	5.95	0.36	A	7.68	0.9	7.46	0.49	A	7.99
2 - B184 Thaxted Road (S)	0.5	6.03	0.33	A		0.6	6.46	0.37	A	
3 - Peaslands Road	1.2	10.15	0.55	B		1.1	9.75	0.53	A	
	2028 Base + CD									
1 - B184 Thaxted Road (N)	0.8	7.21	0.46	A	10.28	1.7	11.02	0.64	B	11.89
2 - B184 Thaxted Road (S)	1.1	8.64	0.52	A		1.0	8.33	0.50	A	
3 - Peaslands Road	1.9	14.47	0.67	B		2.2	15.72	0.70	C	
	2028 Base + CD + Dev									
1 - B184 Thaxted Road (N)	0.9	7.29	0.46	A	10.70	1.8	11.63	0.65	B	12.51
2 - B184 Thaxted Road (S)	1.2	9.15	0.55	A		1.0	8.50	0.51	A	
3 - Peaslands Road	2.1	15.15	0.68	C		2.4	16.72	0.71	C	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

File summary

File Description

Title	
Location	
Site number	
Date	08/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	mtp\MTPGeneral
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
JUNCTIONS 9	5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base	AM	ONE HOUR	08:00	09:30	15	✓
D2	2022 Base	PM	ONE HOUR	15:45	17:15	15	✓
D3	2028 Base + CD	AM	ONE HOUR	08:00	09:30	15	✓
D4	2028 Base + CD	PM	ONE HOUR	15:45	17:15	15	✓
D5	2028 Base + CD + Dev	AM	ONE HOUR	08:00	09:30	15	✓
D6	2028 Base + CD + Dev	PM	ONE HOUR	15:45	17:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2022 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	7.68	A

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		7.68	A

Arms

Arms

Arm	Name	Description
1	B184 Thaxted Road (N)	
2	B184 Thaxted Road (S)	
3	Peaslands Road	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1 - B184 Thaxted Road (N)	3.00	3.00	5.30	7.4	14.14	14.01	0.0	
2 - B184 Thaxted Road (S)	3.00	3.00	4.60	2.9	11.72	8.71	0.0	
3 - Peaslands Road	3.20	3.20	4.89	2.7	7.47	5.24	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B184 Thaxted Road (N)	0.649	1080
2 - B184 Thaxted Road (S)	0.613	1042
3 - Peaslands Road	0.619	912

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - B184 Thaxted Road (N)		ONE HOUR	✓	306	100.000
2 - B184 Thaxted Road (S)		ONE HOUR	✓	262	100.000
3 - Peaslands Road		ONE HOUR	✓	393	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B184 Thaxted Road (N)	2 - B184 Thaxted Road (S)	3 - Peaslands Road
From	1 - B184 Thaxted Road (N)	1	122	183
	2 - B184 Thaxted Road (S)	148	0	114
	3 - Peaslands Road	260	133	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
		1 - B184 Thaxted Road (N)	2 - B184 Thaxted Road (S)	3 - Peaslands Road
From	1 - B184 Thaxted Road (N)	0	3	5
	2 - B184 Thaxted Road (S)	2	0	4
	3 - Peaslands Road	2	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B184 Thaxted Road (N)	0.36	5.95	0.6	A	281	421
2 - B184 Thaxted Road (S)	0.33	6.03	0.5	A	240	361
3 - Peaslands Road	0.55	10.15	1.2	B	361	541

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	230	58	99	972	0.237	229	306	0.0	0.3	4.839	A
2 - B184 Thaxted Road (S)	197	49	138	926	0.213	196	191	0.0	0.3	4.923	A
3 - Peaslands Road	296	74	112	820	0.361	294	222	0.0	0.6	6.817	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	275	69	119	959	0.287	275	367	0.3	0.4	5.259	A
2 - B184 Thaxted Road (S)	236	59	165	909	0.259	235	229	0.3	0.3	5.338	A
3 - Peaslands Road	353	88	134	806	0.438	352	267	0.6	0.8	7.924	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	337	84	146	942	0.358	336	449	0.4	0.6	5.939	A
2 - B184 Thaxted Road (S)	288	72	202	886	0.326	288	280	0.3	0.5	6.013	A
3 - Peaslands Road	433	108	164	787	0.550	431	326	0.8	1.2	10.050	B

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	337	84	146	941	0.358	337	450	0.6	0.6	5.954	A
2 - B184 Thaxted Road (S)	288	72	203	886	0.326	288	281	0.5	0.5	6.025	A
3 - Peaslands Road	433	108	164	787	0.550	433	327	1.2	1.2	10.147	B

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	275	69	120	958	0.287	276	369	0.6	0.4	5.276	A
2 - B184 Thaxted Road (S)	236	59	166	909	0.259	236	230	0.5	0.4	5.354	A
3 - Peaslands Road	353	88	134	806	0.439	355	268	1.2	0.8	8.019	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	230	58	100	971	0.237	231	309	0.4	0.3	4.863	A
2 - B184 Thaxted Road (S)	197	49	139	926	0.213	198	192	0.4	0.3	4.947	A
3 - Peaslands Road	296	74	112	819	0.361	297	224	0.8	0.6	6.906	A

2022 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	7.99	A

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		7.99	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022 Base	PM	ONE HOUR	15:45	17:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - B184 Thaxted Road (N)		ONE HOUR	✓	419	100.000
2 - B184 Thaxted Road (S)		ONE HOUR	✓	291	100.000
3 - Peaslands Road		ONE HOUR	✓	375	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B184 Thaxted Road (N)	2 - B184 Thaxted Road (S)	3 - Peaslands Road
From	1 - B184 Thaxted Road (N)	0	212	207
	2 - B184 Thaxted Road (S)	147	0	144
	3 - Peaslands Road	218	157	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
		1 - B184 Thaxted Road (N)	2 - B184 Thaxted Road (S)	3 - Peaslands Road
From	1 - B184 Thaxted Road (N)	0	2	2
	2 - B184 Thaxted Road (S)	3	0	2
	3 - Peaslands Road	3	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B184 Thaxted Road (N)	0.49	7.46	0.9	A	384	577
2 - B184 Thaxted Road (S)	0.37	6.46	0.6	A	267	401
3 - Peaslands Road	0.53	9.75	1.1	A	344	516

Main Results for each time segment

15:45 - 16:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	315	79	117	981	0.322	314	273	0.0	0.5	5.379	A
2 - B184 Thaxted Road (S)	219	55	155	922	0.238	218	276	0.0	0.3	5.107	A
3 - Peaslands Road	282	71	110	814	0.347	280	263	0.0	0.5	6.721	A

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	377	94	141	965	0.390	376	327	0.5	0.6	6.103	A
2 - B184 Thaxted Road (S)	262	65	186	903	0.290	261	331	0.3	0.4	5.606	A
3 - Peaslands Road	337	84	132	800	0.421	336	315	0.5	0.7	7.744	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	461	115	172	945	0.488	460	401	0.6	0.9	7.411	A
2 - B184 Thaxted Road (S)	320	80	227	878	0.365	320	405	0.4	0.6	6.445	A
3 - Peaslands Road	413	103	162	782	0.528	411	386	0.7	1.1	9.668	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	461	115	173	944	0.489	461	402	0.9	0.9	7.455	A
2 - B184 Thaxted Road (S)	320	80	228	877	0.365	320	406	0.6	0.6	6.465	A
3 - Peaslands Road	413	103	162	782	0.528	413	386	1.1	1.1	9.749	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	377	94	142	965	0.390	378	329	0.9	0.6	6.149	A
2 - B184 Thaxted Road (S)	262	65	187	902	0.290	262	333	0.6	0.4	5.631	A
3 - Peaslands Road	337	84	132	800	0.421	339	316	1.1	0.7	7.826	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	315	79	119	980	0.322	316	275	0.6	0.5	5.427	A
2 - B184 Thaxted Road (S)	219	55	156	921	0.238	219	278	0.4	0.3	5.136	A
3 - Peaslands Road	282	71	111	813	0.347	283	265	0.7	0.5	6.798	A

2028 Base + CD, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	10.28	B

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		10.28	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2028 Base + CD	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - B184 Thaxted Road (N)		ONE HOUR	✓	382	100.000
2 - B184 Thaxted Road (S)		ONE HOUR	✓	415	100.000
3 - Peaslands Road		ONE HOUR	✓	449	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B184 Thaxted Road (N)	2 - B184 Thaxted Road (S)	3 - Peaslands Road
From	1 - B184 Thaxted Road (N)	1	168	213
	2 - B184 Thaxted Road (S)	226	0	189
	3 - Peaslands Road	278	171	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
		1 - B184 Thaxted Road (N)	2 - B184 Thaxted Road (S)	3 - Peaslands Road
From	1 - B184 Thaxted Road (N)	0	2	5
	2 - B184 Thaxted Road (S)	1	0	3
	3 - Peaslands Road	1	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B184 Thaxted Road (N)	0.46	7.21	0.8	A	351	526
2 - B184 Thaxted Road (S)	0.52	8.64	1.1	A	381	571
3 - Peaslands Road	0.67	14.47	1.9	B	412	618

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	288	72	128	959	0.300	286	377	0.0	0.4	5.334	A
2 - B184 Thaxted Road (S)	312	78	160	921	0.339	310	253	0.0	0.5	5.878	A
3 - Peaslands Road	338	85	170	792	0.427	335	301	0.0	0.7	7.834	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	343	86	153	943	0.364	343	453	0.4	0.6	5.997	A
2 - B184 Thaxted Road (S)	373	93	192	901	0.414	372	304	0.5	0.7	6.801	A
3 - Peaslands Road	404	101	204	771	0.524	402	361	0.7	1.1	9.726	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	421	105	187	921	0.457	420	553	0.6	0.8	7.166	A
2 - B184 Thaxted Road (S)	457	114	235	874	0.523	455	372	0.7	1.1	8.575	A
3 - Peaslands Road	494	124	249	743	0.665	491	441	1.1	1.9	14.098	B

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	421	105	188	920	0.457	421	556	0.8	0.8	7.206	A
2 - B184 Thaxted Road (S)	457	114	236	873	0.523	457	373	1.1	1.1	8.641	A
3 - Peaslands Road	494	124	250	743	0.666	494	443	1.9	1.9	14.466	B

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	343	86	155	942	0.365	344	457	0.8	0.6	6.038	A
2 - B184 Thaxted Road (S)	373	93	193	900	0.414	375	306	1.1	0.7	6.866	A
3 - Peaslands Road	404	101	205	770	0.524	407	363	1.9	1.1	9.995	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	288	72	129	958	0.300	288	382	0.6	0.4	5.380	A
2 - B184 Thaxted Road (S)	312	78	161	920	0.340	313	256	0.7	0.5	5.938	A
3 - Peaslands Road	338	85	171	791	0.427	340	303	1.1	0.8	8.003	A

2028 Base + CD, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	11.89	B

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		11.89	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2028 Base + CD	PM	ONE HOUR	15:45	17:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - B184 Thaxted Road (N)		ONE HOUR	✓	517	100.000
2 - B184 Thaxted Road (S)		ONE HOUR	✓	389	100.000
3 - Peaslands Road		ONE HOUR	✓	475	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B184 Thaxted Road (N)	2 - B184 Thaxted Road (S)	3 - Peaslands Road
From	1 - B184 Thaxted Road (N)	0	285	232
	2 - B184 Thaxted Road (S)	197	0	192
	3 - Peaslands Road	249	226	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
		1 - B184 Thaxted Road (N)	2 - B184 Thaxted Road (S)	3 - Peaslands Road
From	1 - B184 Thaxted Road (N)	0	2	2
	2 - B184 Thaxted Road (S)	3	0	2
	3 - Peaslands Road	3	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B184 Thaxted Road (N)	0.64	11.02	1.7	B	474	712
2 - B184 Thaxted Road (S)	0.50	8.33	1.0	A	357	535
3 - Peaslands Road	0.70	15.72	2.2	C	436	654

Main Results for each time segment

15:45 - 16:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	389	97	169	948	0.411	386	333	0.0	0.7	6.381	A
2 - B184 Thaxted Road (S)	293	73	173	910	0.322	291	382	0.0	0.5	5.794	A
3 - Peaslands Road	358	89	147	794	0.450	354	317	0.0	0.8	8.129	A

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	465	116	202	926	0.502	464	400	0.7	1.0	7.766	A
2 - B184 Thaxted Road (S)	350	87	208	889	0.393	349	458	0.5	0.6	6.655	A
3 - Peaslands Road	427	107	177	776	0.550	425	380	0.8	1.2	10.224	B

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	569	142	247	897	0.635	566	488	1.0	1.7	10.810	B
2 - B184 Thaxted Road (S)	428	107	254	861	0.497	427	559	0.6	1.0	8.266	A
3 - Peaslands Road	523	131	216	751	0.696	519	465	1.2	2.2	15.230	C

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	569	142	249	895	0.636	569	491	1.7	1.7	11.018	B
2 - B184 Thaxted Road (S)	428	107	255	860	0.498	428	562	1.0	1.0	8.329	A
3 - Peaslands Road	523	131	217	751	0.696	523	467	2.2	2.2	15.724	C

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	465	116	205	924	0.503	468	404	1.7	1.0	7.930	A
2 - B184 Thaxted Road (S)	350	87	210	888	0.394	351	463	1.0	0.7	6.716	A
3 - Peaslands Road	427	107	178	775	0.551	431	383	2.2	1.3	10.569	B

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	389	97	171	946	0.411	391	337	1.0	0.7	6.489	A
2 - B184 Thaxted Road (S)	293	73	175	909	0.322	294	386	0.7	0.5	5.853	A
3 - Peaslands Road	358	89	149	793	0.451	359	320	1.3	0.8	8.326	A

2028 Base + CD + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	10.70	B

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		10.70	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2028 Base + CD + Dev	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - B184 Thaxted Road (N)		ONE HOUR	✓	385	100.000
2 - B184 Thaxted Road (S)		ONE HOUR	✓	436	100.000
3 - Peaslands Road		ONE HOUR	✓	453	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B184 Thaxted Road (N)	2 - B184 Thaxted Road (S)	3 - Peaslands Road
From	1 - B184 Thaxted Road (N)	1	171	213
	2 - B184 Thaxted Road (S)	236	0	200
	3 - Peaslands Road	278	175	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
		1 - B184 Thaxted Road (N)	2 - B184 Thaxted Road (S)	3 - Peaslands Road
From	1 - B184 Thaxted Road (N)	0	2	5
	2 - B184 Thaxted Road (S)	1	0	3
	3 - Peaslands Road	1	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B184 Thaxted Road (N)	0.46	7.29	0.9	A	353	530
2 - B184 Thaxted Road (S)	0.55	9.15	1.2	A	400	600
3 - Peaslands Road	0.68	15.15	2.1	C	416	624

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	290	72	131	957	0.303	288	385	0.0	0.4	5.364	A
2 - B184 Thaxted Road (S)	328	82	160	921	0.356	326	259	0.0	0.5	6.030	A
3 - Peaslands Road	341	85	177	787	0.433	338	309	0.0	0.8	7.964	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	346	87	157	940	0.368	346	462	0.4	0.6	6.044	A
2 - B184 Thaxted Road (S)	392	98	192	901	0.435	391	310	0.5	0.8	7.052	A
3 - Peaslands Road	407	102	213	765	0.532	406	371	0.8	1.1	9.970	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	424	106	191	918	0.462	423	564	0.6	0.8	7.250	A
2 - B184 Thaxted Road (S)	480	120	235	874	0.549	478	379	0.8	1.2	9.065	A
3 - Peaslands Road	499	125	260	736	0.677	495	453	1.1	2.0	14.711	B

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	424	106	193	917	0.462	424	567	0.8	0.9	7.293	A
2 - B184 Thaxted Road (S)	480	120	236	873	0.550	480	381	1.2	1.2	9.150	A
3 - Peaslands Road	499	125	261	736	0.678	499	455	2.0	2.1	15.147	C

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	346	87	159	939	0.368	347	466	0.9	0.6	6.092	A
2 - B184 Thaxted Road (S)	392	98	193	900	0.435	394	313	1.2	0.8	7.132	A
3 - Peaslands Road	407	102	214	765	0.533	411	373	2.1	1.2	10.276	B

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	290	72	132	956	0.303	290	389	0.6	0.4	5.413	A
2 - B184 Thaxted Road (S)	328	82	161	920	0.357	329	261	0.8	0.6	6.102	A
3 - Peaslands Road	341	85	179	786	0.434	343	312	1.2	0.8	8.146	A

2028 Base + CD + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	12.51	B

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		12.51	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2028 Base + CD + Dev	PM	ONE HOUR	15:45	17:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - B184 Thaxted Road (N)		ONE HOUR	✓	526	100.000
2 - B184 Thaxted Road (S)		ONE HOUR	✓	397	100.000
3 - Peaslands Road		ONE HOUR	✓	485	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B184 Thaxted Road (N)	2 - B184 Thaxted Road (S)	3 - Peaslands Road
From	1 - B184 Thaxted Road (N)	0	294	232
	2 - B184 Thaxted Road (S)	201	0	196
	3 - Peaslands Road	249	236	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To		
		1 - B184 Thaxted Road (N)	2 - B184 Thaxted Road (S)	3 - Peaslands Road
From	1 - B184 Thaxted Road (N)	0	2	2
	2 - B184 Thaxted Road (S)	3	0	2
	3 - Peaslands Road	3	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B184 Thaxted Road (N)	0.65	11.63	1.8	B	483	724
2 - B184 Thaxted Road (S)	0.51	8.50	1.0	A	364	546
3 - Peaslands Road	0.71	16.72	2.4	C	445	668

Main Results for each time segment

15:45 - 16:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	396	99	176	943	0.420	393	336	0.0	0.7	6.512	A
2 - B184 Thaxted Road (S)	299	75	173	910	0.328	297	396	0.0	0.5	5.851	A
3 - Peaslands Road	365	91	150	792	0.461	362	320	0.0	0.8	8.298	A

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	473	118	211	920	0.514	472	403	0.7	1.0	8.003	A
2 - B184 Thaxted Road (S)	357	89	208	889	0.401	356	475	0.5	0.7	6.745	A
3 - Peaslands Road	436	109	180	774	0.564	434	384	0.8	1.3	10.553	B

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	579	145	258	890	0.651	576	493	1.0	1.8	11.371	B
2 - B184 Thaxted Road (S)	437	109	254	861	0.508	436	580	0.7	1.0	8.431	A
3 - Peaslands Road	534	133	221	749	0.713	530	469	1.3	2.3	16.094	C

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	579	145	260	888	0.652	579	495	1.8	1.8	11.625	B
2 - B184 Thaxted Road (S)	437	109	255	860	0.508	437	583	1.0	1.0	8.502	A
3 - Peaslands Road	534	133	221	748	0.714	534	471	2.3	2.4	16.715	C

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	473	118	214	918	0.515	476	407	1.8	1.1	8.197	A
2 - B184 Thaxted Road (S)	357	89	210	888	0.402	358	480	1.0	0.7	6.810	A
3 - Peaslands Road	436	109	181	773	0.564	440	387	2.4	1.3	10.956	B

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B184 Thaxted Road (N)	396	99	179	941	0.421	397	340	1.1	0.7	6.635	A
2 - B184 Thaxted Road (S)	299	75	175	909	0.329	300	401	0.7	0.5	5.914	A
3 - Peaslands Road	365	91	152	791	0.461	367	323	1.3	0.9	8.518	A

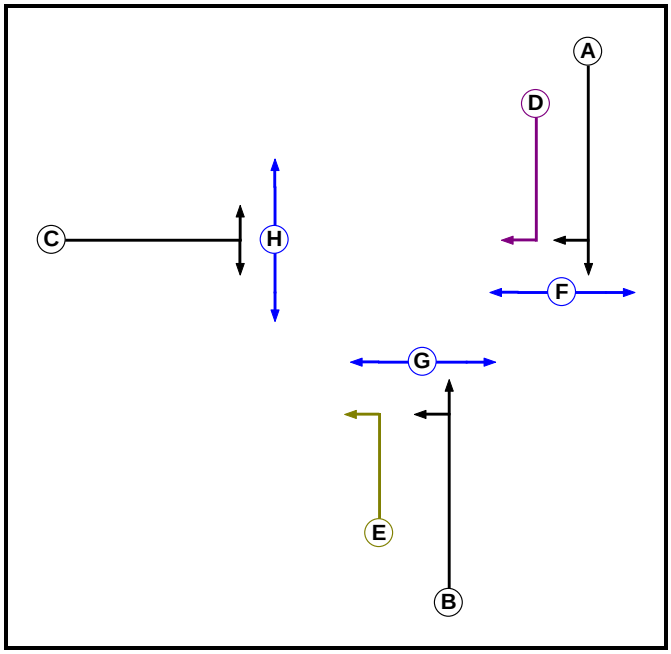
Appendix 14

MTP Results Summary

User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	23075 - B184-Peaslands Rd Signals Rev A.lsg3x
Author:	
Company:	
Address:	

Phase Diagram



Phase Input Data

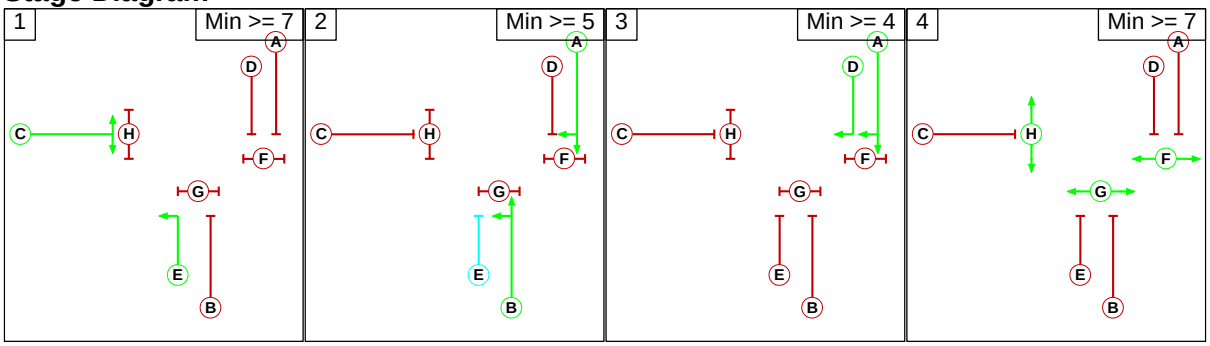
Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Ind. Arrow	A	4	4
E	Filter	B	4	0
F	Pedestrian		7	7
G	Pedestrian		7	7
H	Pedestrian		7	7

MTP Results Summary

Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H
A		-	5	-	-	9	9	9
B	-		6	6	-	9	9	9
C	7	5		7	-	9	9	9
D	-	7	5		5	9	-	9
E	-	-	-	6		-	9	9
F	5	5	5	5	-		-	-
G	5	5	5	-	5	-		-
H	5	5	5	5	5	-	-	

Stage Diagram

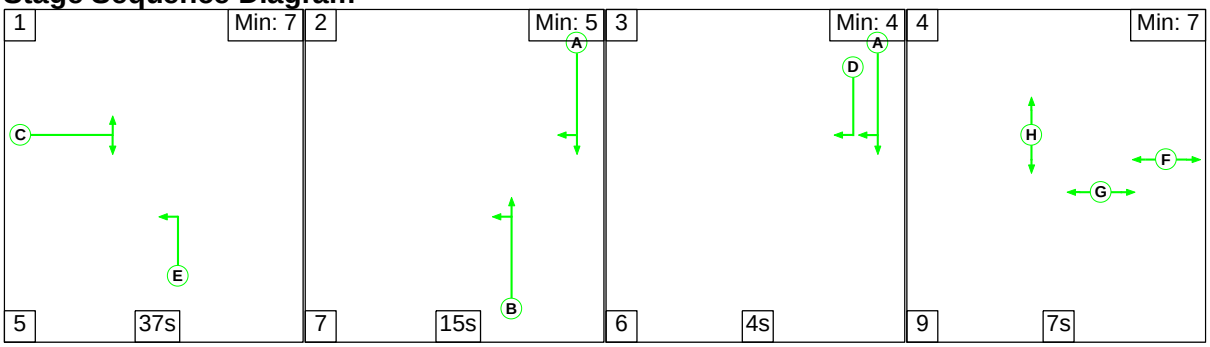


Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Scenario 1: '2028 Base + CD AM' (FG3: '2028 Base + CD AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram



Lane Input Data

Junction: Unnamed Junction

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (B184 Thaxted Road (N))	U	A	2	3	7.0	Geom	-	2.50	0.00	Y	Arm 2 Ahead	Inf
1/2 (B184 Thaxted Road (N))	O	A D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 6 Right	15.00
2/1	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (B184 Thaxted Road (S))	U	B E	2	3	10.0	Geom	-	3.00	0.00	Y	Arm 6 Left	12.00
3/2 (B184 Thaxted Road (S))	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 4 Ahead	Inf
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Peaslands Road)	U	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 2 Right Arm 4 Left	15.00 8.00
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Give-Way Lane Input Data

Junction: Unnamed Junction

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/2 (B184 Thaxted Road (N))	6/1 (Right)	1439	0	3/1	1.09	All	3.00	-	0.50	3	2.00
				3/2	1.09	All					

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
3: '2028 Base + CD AM'	08:15	09:15	01:00	

MTP Results Summary

Traffic Flows, Actual

Actual Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	176	233	409
	B	232	0	199	431
	C	286	182	0	468
	Tot.	518	358	432	1308

MTP Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**65.9%**	**86**	**139**	**8**	**11.3**	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	**65.9%**	**86**	**139**	**8**	**11.3**	-
1/2+1/1	B184 Thaxted Road (N) Ahead Right	O+U	A	D	1	25	4	409	1741:1865	361+273	64.6 : 64.6%	86	139	8	4.4	6.2
3/2+3/1	B184 Thaxted Road (S) Ahead Left	U	B	E	1	17:59	42	431	1915:1702	383+329	60.6 : 60.6%	-	-	-	3.2	6.0
5/1	Peaslands Road Right Left	U	C		1	37	-	468	1682	710	65.9%	-	-	-	3.7	10.3

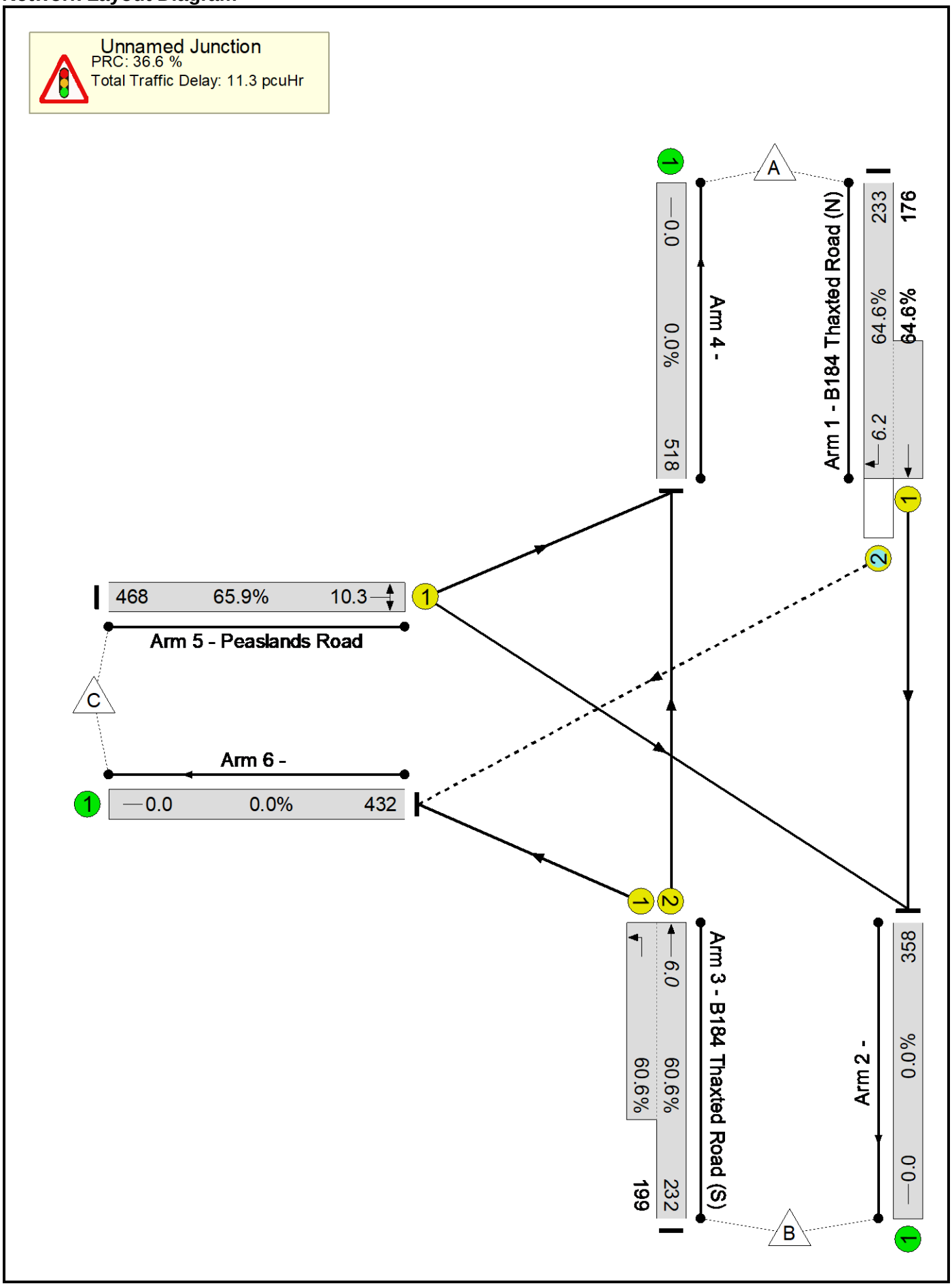
C1

PRC for Signalled Lanes (%): 36.6
PRC Over All Lanes (%): 36.6

Total Delay for Signalled Lanes (pcuHr): 11.25
Total Delay Over All Lanes(pcuHr): 11.25

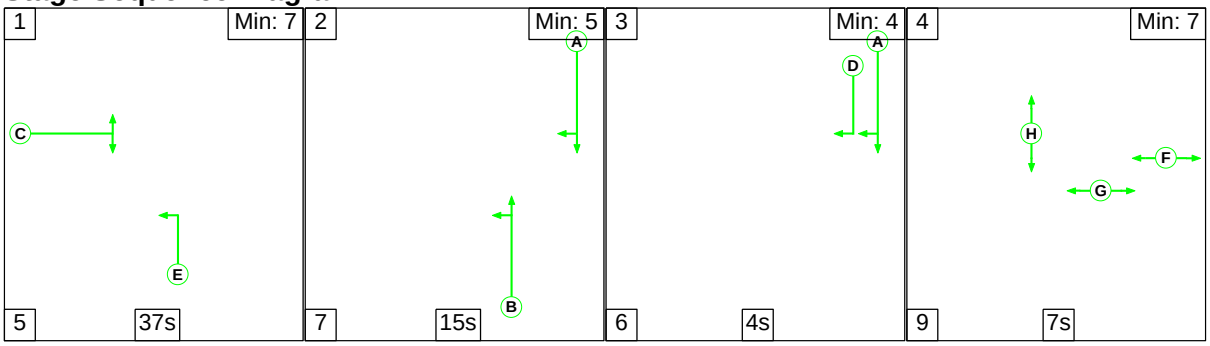
Cycle Time (s): 90

Network Layout Diagram



Scenario 2: '2028 Base + CD PM' (FG4: '2028 Base + CD PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram



Lane Input Data

Junction: Unnamed Junction

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (B184 Thaxted Road (N))	U	A	2	3	7.0	Geom	-	2.50	0.00	Y	Arm 2 Ahead	Inf
1/2 (B184 Thaxted Road (N))	O	A D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 6 Right	15.00
2/1	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (B184 Thaxted Road (S))	U	B E	2	3	10.0	Geom	-	3.00	0.00	Y	Arm 6 Left	12.00
3/2 (B184 Thaxted Road (S))	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 4 Ahead	Inf
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Peaslands Road)	U	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 2 Right	15.00
											Arm 4 Left	8.00
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Give-Way Lane Input Data

Junction: Unnamed Junction											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
1/2 (B184 Thaxted Road (N))	6/1 (Right)	1439	0	3/1	1.09	All	3.00	-	0.50	3	2.00
				3/2	1.09	All					

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
4: '2028 Base + CD PM'	16:00	17:00	01:00	

Traffic Flows, Actual

Actual Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	295	242	537
	B	207	0	198	405
	C	263	239	0	502
	Tot.	470	534	440	1444

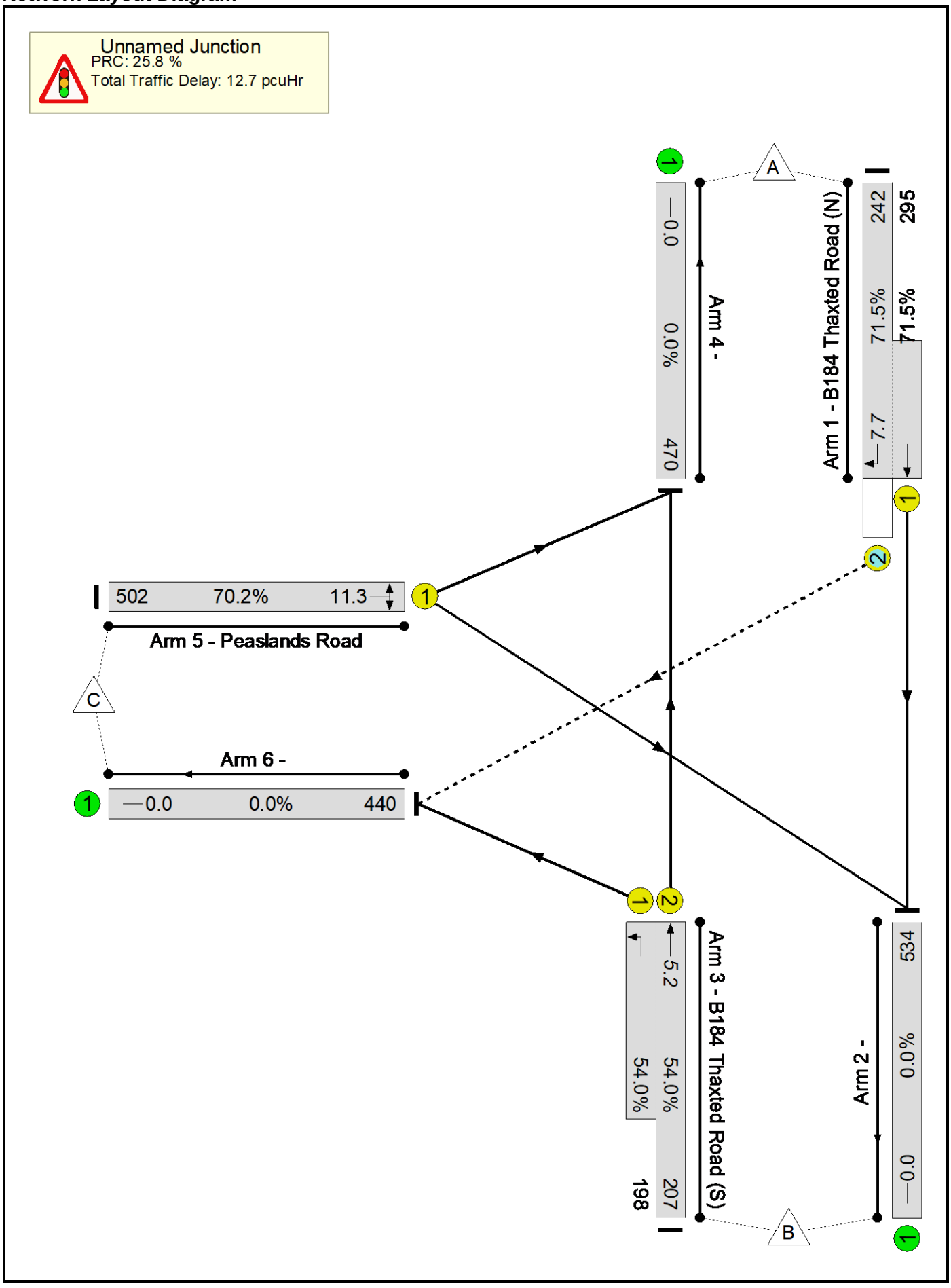
MTP Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**71.5%**	**100**	**134**	**8**	**12.7**	**-**
Unnamed Junction	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**71.5%**	**100**	**134**	**8**	**12.7**	**-**
1/2+1/1	B184 Thaxted Road (N) Ahead Right	O+U	A	D	1	25	4	537	1741:1865	338+412	71.5 : 71.5%	100	134	8	5.8	7.7
3/2+3/1	B184 Thaxted Road (S) Ahead Left	U	B	E	1	17:59	42	405	1915:1702	383+366	54.0 : 54.0%	-	-	-	2.8	5.2
5/1	Peaslands Road Right Left	U	C		1	37	-	502	1693	715	70.2%	-	-	-	4.1	11.3

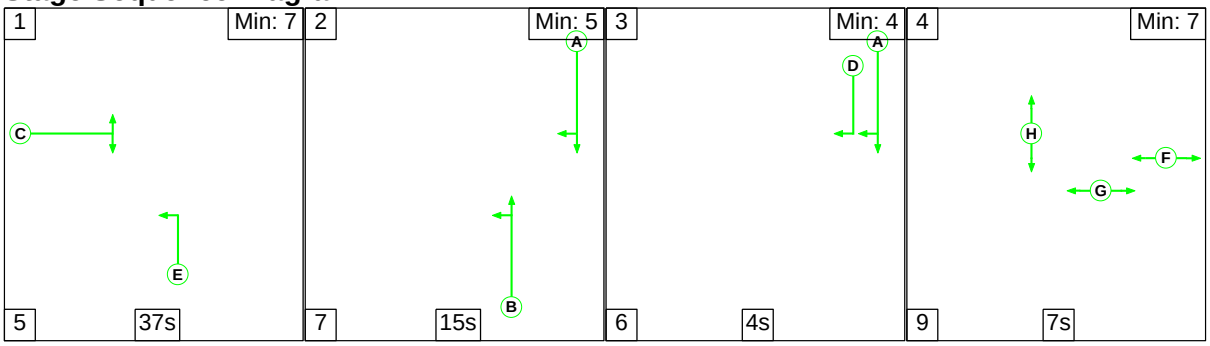
C1 PRC for Signalled Lanes (%): 25.8 Total Delay for Signalled Lanes (pcuHr): 12.73 Cycle Time (s): 90
PRC Over All Lanes (%): 25.8 Total Delay Over All Lanes(pcuHr): 12.73

Network Layout Diagram



Scenario 3: '2028 Base + CD + Dev AM' (FG5: '2028 Base + CD + Dev AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram



Lane Input Data

Junction: Unnamed Junction

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (B184 Thaxted Road (N))	U	A	2	3	7.0	Geom	-	2.50	0.00	Y	Arm 2 Ahead	Inf
1/2 (B184 Thaxted Road (N))	O	A D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 6 Right	15.00
2/1	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (B184 Thaxted Road (S))	U	B E	2	3	10.0	Geom	-	3.00	0.00	Y	Arm 6 Left	12.00
3/2 (B184 Thaxted Road (S))	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 4 Ahead	Inf
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Peaslands Road)	U	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 2 Right	15.00
											Arm 4 Left	8.00
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-

MTP Results Summary

Give-Way Lane Input Data

Junction: Unnamed Junction											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
1/2 (B184 Thaxted Road (N))	6/1 (Right)	1439	0	3/1	1.09	All	3.00	-	0.50	3	2.00
				3/2	1.09	All					

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
5: '2028 Base + CD + Dev AM'	08:15	09:15	01:00	

Traffic Flows, Actual

Actual Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	180	233	413
	B	242	0	210	452
	C	286	185	0	471
	Tot.	528	365	443	1336

MTP Results Summary

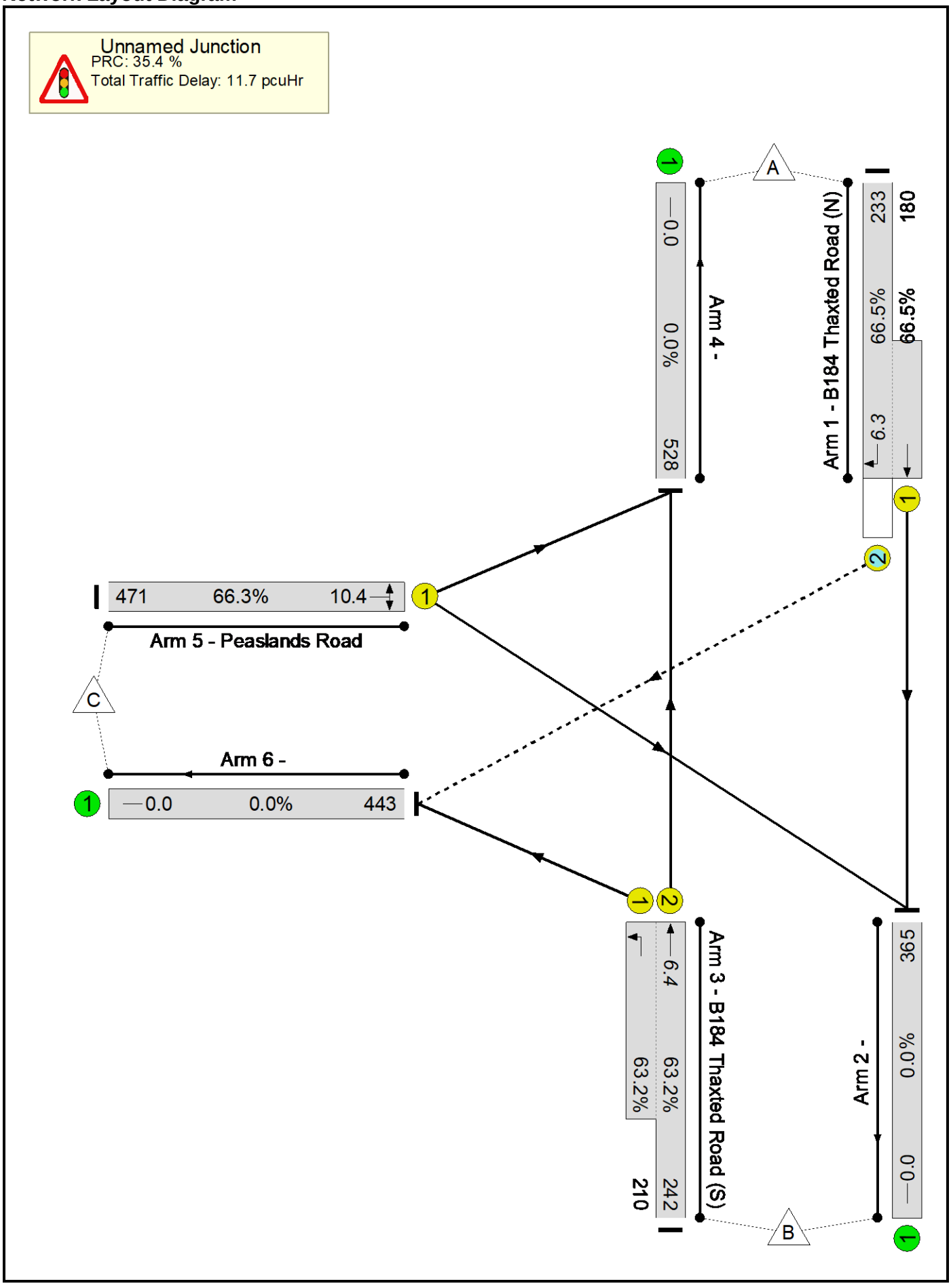
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**66.5%**	**76**	**150**	**8**	**11.7**	**-**
Unnamed Junction	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**66.5%**	**76**	**150**	**8**	**11.7**	**-**
1/2+1/1	B184 Thaxted Road (N) Ahead Right	O+U	A	D	1	25	4	413	1741:1865	350+271	66.5 : 66.5%	76	150	8	4.6	6.3
3/2+3/1	B184 Thaxted Road (S) Ahead Left	U	B	E	1	17:59	42	452	1915:1702	383+332	63.2 : 63.2%	-	-	-	3.4	6.4
5/1	Peaslands Road Right Left	U	C		1	37	-	471	1682	710	66.3%	-	-	-	3.7	10.4

C1 PRC for Signalled Lanes (%): 35.4 Total Delay for Signalled Lanes (pcuHr): 11.66 Cycle Time (s): 90

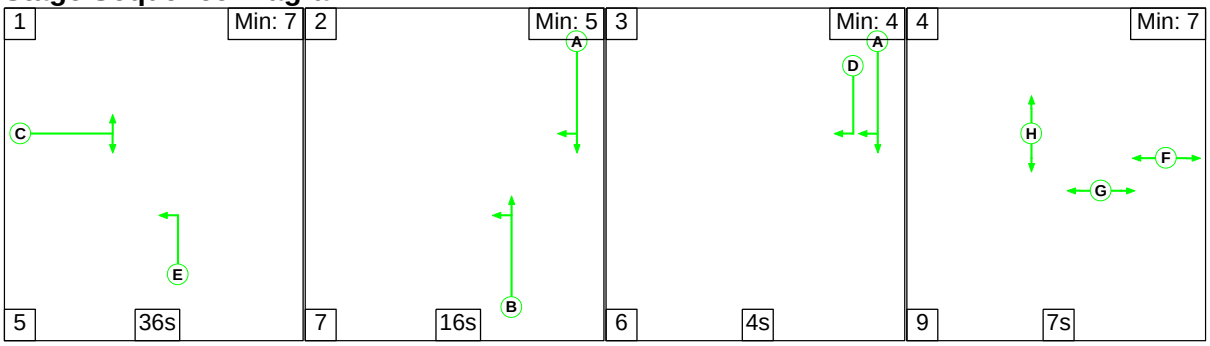
PRC Over All Lanes (%): 35.4 Total Delay Over All Lanes(pcuHr): 11.66

Network Layout Diagram



Scenario 4: '2028 Base + CD + Dev PM' (FG6: '2028 Base + CD + Dev PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram



Lane Input Data

Junction: Unnamed Junction

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (B184 Thaxted Road (N))	U	A	2	3	7.0	Geom	-	2.50	0.00	Y	Arm 2 Ahead	Inf
1/2 (B184 Thaxted Road (N))	O	A D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 6 Right	15.00
2/1	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (B184 Thaxted Road (S))	U	B E	2	3	10.0	Geom	-	3.00	0.00	Y	Arm 6 Left	12.00
3/2 (B184 Thaxted Road (S))	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 4 Ahead	Inf
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Peaslands Road)	U	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 2 Right	15.00
											Arm 4 Left	8.00
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Give-Way Lane Input Data

Junction: Unnamed Junction											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
1/2 (B184 Thaxted Road (N))	6/1 (Right)	1439	0	3/1	1.09	All	3.00	-	0.50	3	2.00
				3/2	1.09	All					

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
6: '2028 Base + CD + Dev PM'	16:00	17:00	01:00	

Traffic Flows, Actual

Actual Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	304	242	546
	B	211	0	203	414
	C	263	248	0	511
	Tot.	474	552	445	1471

MTP Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**73.4%**	**110**	**124**	**8**	**13.0**	**-**
Unnamed Junction	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**73.4%**	**110**	**124**	**8**	**13.0**	**-**
1/2+1/1	B184 Thaxted Road (N) Ahead Right	O+U	A	D	1	26	4	546	1741:1865	339+425	71.5 : 71.5%	110	124	8	5.8	7.8
3/2+3/1	B184 Thaxted Road (S) Ahead Left	U	B	E	1	18:59	41	414	1915:1702	400+385	52.8 : 52.8%	-	-	-	2.7	5.2
5/1	Peaslands Road Right Left	U	C		1	36	-	511	1694	696	73.4%	-	-	-	4.5	12.0

C1 PRC for Signalled Lanes (%): 22.7 Total Delay for Signalled Lanes (pcuHr): 13.04 Cycle Time (s): 90

PRC Over All Lanes (%): 22.7 Total Delay Over All Lanes(pcuHr): 13.04

Network Layout Diagram